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TECHNICAL NOTE

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AN ADDITION TO THE YALE TABLES FOR THE

DEVELOPMENT OF THE DISTURBING FUNCTION

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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by

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SUMMARY

The tables for the development of the disturbing function, published by Brown and Brouwer in 1933, are extended for use in investigating sharp commensurabilities and in computing long pe iod effects in the motions of minor planets with large orbital semi-major axes. The logarithms of the coefficients of $\cos iS$ in the expansions of Δ^{-1} and Δ^{-3} are tabulated for $i = 12$ through 24.

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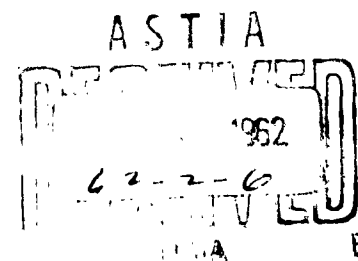
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INTRODUCTION

Despite well developed techniques for the numerical integration of perturbations, the development of perturbations into series (general perturbations) is still of great interest and importance for the study of celestial bodies with peculiar orbital elements. In addition, stability problems preferably should be solved in an analytical way. This report is an initial step in the analytical development of perturbations of some planets with peculiar elements.

For investigations of sharp commensurabilities such as those of Orlov (Reference 1) and long period effects in the motions of minor planets, it is desirable to have an extension of the tables for the development of the disturbing function which were published by Brown and Brouwer (Reference 2). These tables give the logarithms of the coefficients of $\cos iS$ in the expansions of Δ^{-1}, Δ^{-3}, Δ^{-5}, and Δ^{-7} for $i = 0$ through 11 and $p = 0$ through 2.5 with p in steps of .01. For first order general perturbations of celestial bodies with large orbital semi-major axes, the coefficients in the expansions of Δ^{-1} and Δ^{-3} are needed for larger values of the index, i, than are given in the existing tables. The logarithms of these coefficients, together with their second differences, are tabulated here for $i = 12$ through 24 and $p = 0$ through 2.5. The coefficients presented here were computed by the method given by Brown and Brouwer in 1933 (Reference 2). However, some of the equations were taken from Brown's earlier article (Reference 3).

DERIVATION OF TABLES

The basic equation to be solved for $G_s^{(i)}$ is

$$\left(1 - 2a \cos S + a^2\right)^{-s} = \left(1 - a^2\right)^{-s} \left(\frac{1}{2} G_s^{(0)} + \Sigma\, G_s^{(i)} a^i \cos iS\right), \qquad (1)$$

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where

$$G_s^{(i)} = C_s^{(i)} \, g_s^{(i)} \, , \tag{2}$$

$$C_s^{(0)} = 2 \, , $$

$$C_s^{(i)} = 2 \frac{s(s + 1)\cdots(s + i - 1)}{i!} \tag{3}$$

$$g_s^{(i)} = 1 - \frac{s}{1} \cdot \frac{1 - s}{i + 1} p + \frac{s(s + 1)}{1 \cdot 2} \cdot \frac{(1 - s)(2 - s)}{(i + 1)(i + 2)} p^2 + \cdots , \tag{4}$$

$$p = \frac{\alpha^2}{1 - \alpha^2} \, . \tag{5}$$

The series (Equation 4) for $g_{\frac{1}{2}}^{(24)}$ and the corresponding series for $\frac{dg}{dp}$ were evaluated by summing the first three terms and then applying a form of the Euler summability process to the next twenty-two terms. Taking N differences in the Euler transformation,

$$\sum_{k=m}^{\infty} (-1)^k f_k \approx \frac{1}{2} (-1)^m \left[f_m - \frac{1}{2} \Delta f_m + \frac{1}{4} \Delta^2 f_m + \cdots + (-1)^N \, 2^{-N} \, \Delta^N f_m \right] \, . \tag{6}$$

is equivalent to writing

$$\sum_{k=m}^{\infty} (-1)^k f_k \approx \sum_{k=m}^{m+N} (-1)^k A_k f_k \, , \tag{7}$$

where

$$A_k = \sum_{j=k-m}^{N} \frac{1}{2^{j+1}} \binom{j}{k - m} \, . \tag{8}$$

Thus the coefficients in terms 4 thru 25 of the series (Equation 4) were multiplied by the coefficients A_k determined from Equation 8 with $m = 4$ and $N = 21$. An accuracy

test was made by evaluating the corresponding series for $\frac{d}{dp}\left(g_{\frac{1}{2}}^{(24)}\right)$, $\frac{d^2}{dp^2}\left(g_{\frac{1}{2}}^{(24)}\right)$

and $\int_0^p \left(g_{\frac{1}{2}}^{(24)}\right) dp$, for $p = 0.5, 1.0, \cdots, 2.5$. The left hand sides of the test equations

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$$\left(p + p^2\right) \frac{d^2}{dp^2}\left(g_s^{(i)}\right) + (2p + 1 + i)\frac{d}{dp}\left(g_s^{(i)}\right) + \frac{1}{4}g_s^{(i)} = 0 \tag{9}$$

and

$$\left(p + p^2\right) \frac{d}{dp}\left(g_s^{(i)}\right) + i\left(g_s^{(i)} - 1\right) + \frac{1}{4}\int_0^p g_s^{(i)} dp = 0 \tag{10}$$

were evaluated and found to be less than 10^{-10} in all cases.

After $g_{\frac{1}{2}}^{(24)}$ and $\frac{d}{dp}\left(g_{\frac{1}{2}}^{(24)}\right)$ were evaluated from Equation 4, $g_{\frac{1}{2}}^{(23)}$ was computed from the equation

$$g_s^{(i-1)} = g_s^{(i)} + \frac{p}{i}\frac{d}{dp}\left(g_s^{(i)}\right) . \tag{11}$$

The values of $g_{\frac{1}{2}}^{(i)}$ for $i = 22, 21, \cdots, 0$ were computed from the recurrence relation

$$g_s^{(i)} = g_s^{(i+1)} + \frac{p}{1+p}\left[g_s^{(i+1)} - g_s^{(i+2)} + \frac{s(s-1)}{(i+1)(i+2)}g_s^{(i+2)}\right] . \tag{12}$$

As a check, the values for $i = 0, 1, \cdots, 11$ were computed for comparison with the tables of Brown and Brouwer.

After the coefficients were evaluated for $s = \frac{1}{2}$, the recurrence relation

$$g_{s+1}^{(i)} = g_s^{(i)} + 2pH_s^{(i)} , \tag{13}$$

where

$$H_s^{(i)} = g_s^{(i)} - g_s^{(i+1)} + \frac{s}{i+1}g_s^{(i+1)} , \tag{14}$$

was used to compute $g_{\frac{3}{2}}^{(i)}$ for $i = 0, 1, \cdots, 23$. The relation

$$g_{s+1}^{(i+1)} = \frac{i + 1}{i + s + 1} \left(g_{s+1}^{(i)} + H_s^{(i)} \right) \tag{15}$$

was used to compute $g_{\frac{3}{2}}^{(24)}$.

CONCLUSIONS

The values of log $G_s^{(i)}$ and the second differences for $i = 12$ through 24 are given in Appendix A. The differences between the values of log $G_s^{(i)}$ given by Brown and Brouwer and the values computed here are given in Appendix B. The differences are sufficiently small to be of no consequence, yet they are somewhat larger than would be expected from Reference 2 – especially for p between 1.5 and 2. Consequently, some further checks were made. First, the method of analytic continuation given by Brown (Reference 3) was applied for values of p greater than one. The test equations yield errors less than 10^{-12} when this method is used. The results agree with those obtained above by the author.

The second test was a numerical evaluation of the integral

$$G_s^{(i)} = \frac{2}{\pi} \left[\frac{(1 - a^2)^s}{a^i} \right] \int_0^\pi \left(1 - 2a \cos S + a^2 \right)^{-s} \cos iS \, dS. \tag{16}$$

This test was made for $p = 1.5, 1.55, 1.6, \cdots 2.0$. Again the results agree with those obtained herein. The results given in Appendix A are accurate except for possible round-off error of one unit in the eighth place.

For purposes of machine – rather than hand – computation of general perturbations, it is planned that these coefficients will be computed as needed in the program.

ACKNOWLEDGMENT

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2. Brown, E. W., and Brouwer, D., "Tables for the Development of the Disturbing Function with Schedules for Harmonic Analysis," Trans. Yale Astron. Obs., 6(5):69-157, 1933

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APPENDIX A

Values of log $G_a^{(i)}$ and their Second Differences for i = 12 through 15

LOG (G) FOR S=0.5

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P	I=12		I=13		I=14		I=15	
0.	-.49165816	0	-.50869150	0	-.52448576	0	-.53920902	0
0.01	-.49174162	12	-.50876900	10	-.52455810	9	-.53927684	8
0.02	-.49182496	12	-.50884640	10	-.52463035	9	-.53934458	8
0.03	-.49190818	11	-.50892370	11	-.52470251	9	-.53941224	8
0.04	-.49199129	12	-.50900089	9	-.52477458	9	-.53947982	7
0.05	-.49207428	11	-.50907799	11	-.52484656	8	-.53954733	8
0.06	-.49215716	12	-.50915498	9	-.52491846	10	-.53961476	8
0.07	-.49223992	12	-.50923188	11	-.52499026	8	-.53968211	8
0.08	-.49232256	11	-.50930867	9	-.52506198	9	-.53974938	8
0.09	-.49240509	11	-.50938537	11	-.52513361	8	-.53981657	7
0.10	-.49248751	11	-.50946196	9	-.52520516	10	-.53988369	8
0.11	-.49256982	12	-.50953846	10	-.52527661	7	-.53995073	7
0.12	-.49265201	12	-.50961486	10	-.52534799	10	-.54001770	8
0.13	-.49273408	10	-.50969116	9	-.52541927	8	-.54008459	8
0.14	-.49281605	12	-.50976737	11	-.52549047	8	-.54015140	7
0.15	-.49289790	10	-.50984347	9	-.52556159	9	-.54021814	8
0.16	-.49297965	12	-.50991948	9	-.52563262	9	-.54028480	7
0.17	-.49306128	11	-.50999540	10	-.52570356	8	-.54035139	8
0.18	-.49314280	11	-.51007122	10	-.52577442	8	-.54041790	7
0.19	-.49322421	10	-.51014694	10	-.52584520	9	-.54048434	8
0.20	-.49330552	12	-.51022256	8	-.52591589	8	-.54055070	7
0.21	-.49338671	11	-.51029810	11	-.52598650	9	-.54061699	7
0.22	-.49346779	10	-.51037353	9	-.52605702	7	-.54068321	8
0.23	-.49354877	11	-.51044887	9	-.52612747	9	-.54074935	7
0.24	-.49362964	11	-.51052412	9	-.52619783	9	-.54081542	8
0.25	-.49371040	11	-.51059928	10	-.52626810	7	-.54088141	6
0.26	-.49379105	10	-.51067434	9	-.52633830	9	-.54094734	8
0.27	-.49387160	11	-.51074931	10	-.52640841	8	-.54101319	7
0.28	-.49395204	10	-.51082418	9	-.52647844	8	-.54107897	8
0.29	-.49403238	11	-.51089896	9	-.52654839	8	-.54114467	7
0.30	-.49411261	11	-.51097365	9	-.52661826	8	-.54121030	6
0.31	-.49419273	10	-.51104825	9	-.52668805	8	-.54127587	8
0.32	-.49427275	10	-.51112276	9	-.52675776	8	-.54134136	7
0.33	-.49435267	11	-.51119718	10	-.52682739	9	-.54140678	8
0.34	-.49443248	10	-.51127150	8	-.52689693	7	-.54147212	6
0.35	-.49451219	11	-.51134574	10	-.52696640	8	-.54153740	7
0.36	-.49459179	9	-.51141988	8	-.52703579	8	-.54160261	8
0.37	-.49467130	11	-.51149394	10	-.52710510	8	-.54166774	6
0.38	-.49475070	11	-.51156790	8	-.52717433	8	-.54173281	8
0.39	-.49482999	9	-.51164178	9	-.52724348	8	-.54179780	6
0.40	-.49490919	10	-.51171557	9	-.52731255	7	-.54186273	7
0.41	-.49498829	11	-.51178927	9	-.52738155	9	-.54192759	8
0.42	-.49506728	10	-.51186288	9	-.52745046	7	-.54199237	6
0.43	-.49514617	9	-.51193640	8	-.52751930	8	-.54205709	7
0.44	-.49522497	11	-.51200984	10	-.52758806	7	-.54212174	7
0.45	-.49530366	9	-.51208318	8	-.52765675	9	-.54218632	7
0.46	-.49538226	11	-.51215644	8	-.52772535	6	-.54225083	6
0.47	-.49546075	9	-.51222962	10	-.52779389	9	-.54231528	8
0.48	-.49553915	10	-.51230270	8	-.52786234	7	-.54237965	6
0.49	-.49561745	10	-.51237570	8	-.52793072	8	-.54244396	7
0.50	-.49569565	10	-.51244862	9	-.52799902	8	-.54250820	7

LOG (G) FOR S=0.5

P	I=12		I=13		I=14		I=15	
0.50	-.49569565	10	-.51244862	9	-.52799902	8	-.54250820	7
0.51	-.49577375	9	-.51252145	9	-.52806724	6	-.54257237	6
0.52	-.49585176	11	-.51259419	8	-.52813540	9	-.54263648	7
0.53	-.49592966	9	-.51266685	9	-.52820347	7	-.54270052	7
0.54	-.49600747	9	-.51273942	8	-.52827147	7	-.54276449	7
0.55	-.49608519	10	-.51281191	8	-.52833940	8	-.54282839	6
0.56	-.49616281	10	-.51288432	9	-.52840725	8	-.54289223	7
0.57	-.49624033	9	-.51295664	8	-.52847502	6	-.54295600	6
0.58	-.49631776	10	-.51302888	9	-.52854273	9	-.54301971	7
0.59	-.49639509	9	-.51310103	8	-.52861035	6	-.54308335	6
0.60	-.49647233	9	-.51317310	8	-.52867791	8	-.54314693	8
0.61	-.49654948	10	-.51324509	9	-.52874539	7	-.54321043	5
0.62	-.49662653	10	-.51331699	7	-.52881280	8	-.54327388	7
0.63	-.49670348	9	-.51338882	9	-.52888013	6	-.54333726	7
0.64	-.49678034	9	-.51346056	8	-.52894740	8	-.54340057	6
0.65	-.49685711	9	-.51353222	9	-.52901459	8	-.54346382	7
0.66	-.49693379	9	-.51360379	7	-.52908170	6	-.54352700	6
0.67	-.49701038	10	-.51367529	9	-.52914875	8	-.54359012	6
0.68	-.49708687	9	-.51374670	7	-.52921572	6	-.54365318	7
0.69	-.49716327	9	-.51381804	9	-.52928263	8	-.54371617	6
0.70	-.49723958	10	-.51388929	8	-.52934946	7	-.54377910	7
0.71	-.49731579	8	-.51396046	7	-.52941622	8	-.54384196	6
0.72	-.49739192	9	-.51403156	9	-.52948290	6	-.54390476	6
0.73	-.49746796	10	-.51410257	8	-.52954952	7	-.54396750	6
0.74	-.49754390	8	-.51417350	7	-.52961607	8	-.54403018	7
0.75	-.49761976	10	-.51424436	9	-.52968254	6	-.54409279	6
0.76	-.49769552	8	-.51431513	7	-.52974895	7	-.54415534	7
0.77	-.49777120	9	-.51438583	8	-.52981529	8	-.54421782	5
0.78	-.49784679	9	-.51445645	8	-.52988155	6	-.54428025	7
0.79	-.49792229	9	-.51452699	8	-.52994775	7	-.54434261	6
0.80	-.49799770	9	-.51459745	8	-.53001388	7	-.54440491	6
0.81	-.49807302	9	-.51466783	7	-.53007994	7	-.54446715	7
0.82	-.49814825	8	-.51473814	8	-.53014593	7	-.54452932	5
0.83	-.49822340	10	-.51480837	8	-.53021185	7	-.54459144	7
0.84	-.49829845	8	-.51487852	8	-.53027770	7	-.54465349	6
0.85	-.49837342	8	-.51494859	7	-.53034348	6	-.54471548	6
0.86	-.49844831	9	-.51501859	8	-.53040920	7	-.54477741	6
0.87	-.49852311	9	-.51508851	7	-.53047485	7	-.54483928	6
0.88	-.49859782	9	-.51515836	8	-.53054043	7	-.54490109	6
0.89	-.49867244	8	-.51522813	8	-.53060594	7	-.54496284	6
0.90	-.49874698	8	-.51529782	7	-.53067138	6	-.54502453	6
0.91	-.49882144	10	-.51536744	8	-.53073676	7	-.54508616	6
0.92	-.49889580	7	-.51543698	7	-.53080207	6	-.54514773	6
0.93	-.49897009	9	-.51550645	8	-.53086732	8	-.54520924	6
0.94	-.49904429	9	-.51557584	7	-.53093249	6	-.54527069	7
0.95	-.49911840	8	-.51564516	8	-.53099760	6	-.54533207	5
0.96	-.49919243	8	-.51571440	7	-.53106265	7	-.54539340	5
0.97	-.49926638	9	-.51578357	7	-.53112763	7	-.54545468	7
0.98	-.49934024	8	-.51585267	8	-.53119254	6	-.54551589	6
0.99	-.49941402	9	-.51592169	7	-.53125739	7	-.54557704	6
1.00	-.49948771	7	-.51599064	8	-.53132217	7	-.54563813	5

LOG (G) FOR S=0.5

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P	I=12		I=13		I=14		I=15	
1.00	-.49948771	7	-.51599064	8	-.53132217	7	-.54563813	5
1.01	-.49956133	9	-.51605951	6	-.53138688	5	-.54569917	6
1.02	-.49963486	9	-.51612832	8	-.53145154	8	-.54576015	6
1.03	-.49970830	7	-.51619705	8	-.53151612	6	-.54582107	6
1.04	-.49978167	9	-.51626570	6	-.53158064	6	-.54588193	6
1.05	-.49985495	7	-.51633429	8	-.53164510	7	-.54594273	5
1.06	-.49992816	9	-.51640280	7	-.53170949	6	-.54600348	7
1.07	-.50000128	8	-.51647124	8	-.53177382	7	-.54606416	5
1.08	-.50007432	8	-.51653960	6	-.53183808	6	-.54612479	5
1.09	-.50014728	9	-.51660790	7	-.53190228	6	-.54618537	7
1.10	-.50022015	7	-.51667613	8	-.53196642	7	-.54624588	5
1.11	-.50029295	8	-.51674428	7	-.53203049	6	-.54630634	6
1.12	-.50036567	8	-.51681236	7	-.53209450	6	-.54636674	5
1.13	-.50043831	9	-.51688037	7	-.53215845	7	-.54642709	7
1.14	-.50051086	7	-.51694831	7	-.53222233	6	-.54648737	4
1.15	-.50058334	8	-.51701618	7	-.53228615	6	-.54654761	7
1.16	-.50065574	8	-.51708398	6	-.53234991	6	-.54660778	5
1.17	-.50072806	8	-.51715172	8	-.53241361	7	-.54666790	6
1.18	-.50080030	7	-.51721938	7	-.53247724	6	-.54672796	5
1.19	-.50087247	9	-.51728697	7	-.53254081	6	-.54678797	6
1.20	-.50094455	7	-.51735449	7	-.53260432	6	-.54684792	5
1.21	-.50101656	8	-.51742194	7	-.53266777	7	-.54690782	6
1.22	-.50108849	8	-.51748932	6	-.53273115	6	-.54696766	6
1.23	-.50116034	8	-.51755664	8	-.53279447	5	-.54702744	6
1.24	-.50123211	7	-.51762388	6	-.53285774	7	-.54708717	5
1.25	-.50130381	8	-.51769106	7	-.53292094	6	-.54714685	6
1.26	-.50137543	8	-.51775817	7	-.53298408	6	-.54720647	6
1.27	-.50144697	7	-.51782521	7	-.53304716	6	-.54726603	5
1.28	-.50151844	8	-.51789218	6	-.53311018	7	-.54732554	5
1.29	-.50158983	8	-.51795909	7	-.53317313	5	-.54738500	6
1.30	-.50166114	7	-.51802593	7	-.53323603	6	-.54744440	5
1.31	-.50173238	8	-.51809270	7	-.53329887	6	-.54750375	6
1.32	-.50180354	7	-.51815940	6	-.53336165	7	-.54756304	5
1.33	-.50187463	8	-.51822604	7	-.53342436	5	-.54762228	5
1.34	-.50194564	7	-.51829261	7	-.53348702	6	-.54768147	6
1.35	-.50201658	8	-.51835911	7	-.53354962	6	-.54774060	5
1.36	-.50208744	7	-.51842554	6	-.53361216	6	-.54779968	5
1.37	-.50215823	8	-.51849191	6	-.53367464	6	-.54785871	6
1.38	-.50222894	7	-.51855822	7	-.53373706	6	-.54791768	5
1.39	-.50229958	7	-.51862446	7	-.53379942	6	-.54797660	6
1.40	-.50237015	8	-.51869063	6	-.53386172	6	-.54803546	5
1.41	-.50244064	7	-.51875674	7	-.53392396	5	-.54809427	4
1.42	-.50251106	8	-.51882278	7	-.53398615	6	-.54815304	7
1.43	-.50258140	7	-.51888875	6	-.53404828	7	-.54821174	4
1.44	-.50265167	7	-.51895466	6	-.53411034	5	-.54827040	6
1.45	-.50272187	7	-.51902051	7	-.53417235	5	-.54832900	5
1.46	-.50279200	8	-.51908629	6	-.53423431	7	-.54838755	5
1.47	-.50286205	7	-.51915201	7	-.53429620	5	-.54844605	5
1.48	-.50293203	7	-.51921766	6	-.53435804	6	-.54850450	6
1.49	-.50300194	7	-.51928325	6	-.53441982	6	-.54856289	5
1.50	-.50307178	7	-.51934878	7	-.53448154	6	-.54862123	5

LOG (G) FOR S=0.5

P	I=12		I=13		I=14		I=15	
1.50	-.50307178	7	-.51934878	7	-.53448154	6	-.54862123	5
1.51	-.50314155	8	-.51941424	7	-.53454320	5	-.54867952	5
1.52	-.50321124	7	-.51947963	5	-.53460481	6	-.54873776	5
1.53	-.50328086	6	-.51954497	7	-.53466636	5	-.54879595	5
1.54	-.50335042	8	-.51961024	7	-.53472786	7	-.54885409	5
1.55	-.50341990	7	-.51967544	5	-.53478929	5	-.54891218	6
1.56	-.50348931	7	-.51974059	7	-.53485067	5	-.54897021	4
1.57	-.50355865	7	-.51980567	6	-.53491200	6	-.54902820	6
1.58	-.50362792	8	-.51987069	6	-.53497327	6	-.54908613	5
1.59	-.50369711	6	-.51993565	7	-.53503448	5	-.54914401	5
1.60	-.50376624	7	-.52000054	6	-.53509564	6	-.54920184	4
1.61	-.50383530	7	-.52006537	6	-.53515674	6	-.54925963	6
1.62	-.50390429	7	-.52013014	6	-.53521778	5	-.54931736	5
1.63	-.50397321	6	-.52019485	7	-.53527877	6	-.54937504	5
1.64	-.50404207	8	-.52025949	5	-.53533970	5	-.54943267	5
1.65	-.50411085	7	-.52032408	7	-.53540058	5	-.54949025	5
1.66	-.50417956	6	-.52038860	6	-.53546141	7	-.54954778	4
1.67	-.50424821	8	-.52045306	6	-.53552217	4	-.54960527	6
1.68	-.50431678	6	-.52051746	6	-.53558289	6	-.54966270	5
1.69	-.50438529	7	-.52058180	6	-.53564355	6	-.54972008	4
1.70	-.50445373	7	-.52064608	6	-.53570415	5	-.54977742	6
1.71	-.50452210	6	-.52071030	6	-.53576470	6	-.54983470	4
1.72	-.50459041	7	-.52077446	6	-.53582519	4	-.54989194	6
1.73	-.50465865	8	-.52083856	7	-.53588564	7	-.54994912	4
1.74	-.50472681	5	-.52090259	5	-.53594602	4	-.55000626	5
1.75	-.50479492	8	-.52096657	6	-.53600636	6	-.55006335	5
1.76	-.50486295	6	-.52103049	6	-.53606664	6	-.55012039	5
1.77	-.50493092	7	-.52109435	7	-.53612686	5	-.55017738	5
1.78	-.50499882	6	-.52115814	5	-.53618703	5	-.55023432	4
1.79	-.50506666	7	-.52122188	6	-.53624715	5	-.55029122	5
1.80	-.50513443	7	-.52128556	6	-.53630722	6	-.55034807	6
1.81	-.50520213	6	-.52134918	6	-.53636723	5	-.55040486	3
1.82	-.50526977	7	-.52141274	5	-.53642719	6	-.55046162	6
1.83	-.50533734	7	-.52147625	7	-.53648709	4	-.55051832	5
1.84	-.50540484	6	-.52153969	5	-.53654695	6	-.55057497	4
1.85	-.50547228	7	-.52160308	7	-.53660675	5	-.55063158	5
1.86	-.50553965	6	-.52166640	5	-.53666650	6	-.55068814	5
1.87	-.50560696	6	-.52172967	6	-.53672619	4	-.55074465	4
1.88	-.50567421	7	-.52179288	5	-.53678584	6	-.55080112	5
1.89	-.50574139	7	-.52185604	7	-.53684543	5	-.55085754	5
1.90	-.50580850	6	-.52191913	5	-.53690497	6	-.55091391	5
1.91	-.50587555	6	-.52198217	6	-.53696445	4	-.55097023	4
1.92	-.50594254	7	-.52204515	6	-.53702389	6	-.55102651	5
1.93	-.50600946	6	-.52210807	6	-.53708327	5	-.55108274	5
1.94	-.50607632	7	-.52217093	5	-.53714260	4	-.55113892	4
1.95	-.50614311	6	-.52223374	6	-.53720189	7	-.55119506	5
1.96	-.50620984	6	-.52229649	5	-.53726111	4	-.55125115	5
1.97	-.50627651	7	-.52235919	7	-.53732029	5	-.55130719	4
1.98	-.50634311	6	-.52242182	5	-.53737942	5	-.55136319	5
1.99	-.50640965	6	-.52248440	5	-.53743850	6	-.55141914	5
2.00	-.50647613	7	-.52254693	7	-.53749752	4	-.55147504	4

LOG (G) FOR S=0.5

G-214

P	I=12		I=13		I=14		I=15	
2.00	-.50647613	7	-.52254693	7	-.53749752	4	-.55147504	4
2.01	-.50654254	6	-.52260939	4	-.53755650	6	-.55153090	4
2.02	-.50660889	6	-.52267181	7	-.53761542	5	-.55158672	6
2.03	-.50667518	6	-.52273416	5	-.53767429	4	-.55164248	3
2.04	-.50674141	7	-.52279646	6	-.53773312	6	-.55169821	6
2.05	-.50680757	6	-.52285870	5	-.53779189	5	-.55175388	4
2.06	-.50687367	6	-.52292089	5	-.53785061	5	-.55180951	4
2.07	-.50693971	6	-.52298303	7	-.53790928	4	-.55186510	5
2.08	-.50700569	6	-.52304510	5	-.53796791	6	-.55192064	5
2.09	-.50707161	7	-.52310712	5	-.53802648	5	-.55197613	4
2.10	-.50713746	5	-.52316909	6	-.53808500	5	-.55203158	4
2.11	-.50720326	7	-.52323100	5	-.53814347	4	-.55208699	5
2.12	-.50726899	6	-.52329286	6	-.53820190	6	-.55214235	5
2.13	-.50733466	6	-.52335466	5	-.53826027	4	-.55219766	4
2.14	-.50740027	6	-.52341641	6	-.53831860	6	-.55225293	4
2.15	-.50746582	6	-.52347810	5	-.53837687	4	-.55230816	5
2.16	-.50753131	6	-.52353974	5	-.53843510	5	-.55236334	4
2.17	-.50759674	6	-.52360133	6	-.53849328	5	-.55241848	5
2.18	-.50766211	7	-.52366286	6	-.53855141	5	-.55247357	4
2.19	-.50772741	5	-.52372433	5	-.53860949	5	-.55252862	5
2.20	-.50779266	6	-.52378575	5	-.53866752	5	-.55258362	4
2.21	-.50785785	6	-.52384712	5	-.53872550	4	-.55263858	4
2.22	-.50792298	6	-.52390844	6	-.53878344	6	-.55269350	5
2.23	-.50798805	6	-.52396970	5	-.53884132	4	-.55274837	4
2.24	-.50805306	6	-.52403091	6	-.53889916	5	-.55280320	5
2.25	-.50811801	6	-.52409206	4	-.53895695	5	-.55285798	4
2.26	-.50818290	6	-.52415317	7	-.53901469	4	-.55291272	4
2.27	-.50824773	6	-.52421421	4	-.53907239	6	-.55296742	4
2.28	-.50831250	5	-.52427521	6	-.53913003	4	-.55302208	5
2.29	-.50837722	7	-.52433615	5	-.53918763	4	-.55307669	4
2.30	-.50844187	5	-.52439704	5	-.53924519	6	-.55313126	5
2.31	-.50850647	6	-.52445788	5	-.53930269	4	-.55318578	4
2.32	-.50857101	6	-.52451867	6	-.53936015	6	-.55324026	4
2.33	-.50863549	6	-.52457940	5	-.53941755	3	-.55329470	4
2.34	-.50869991	5	-.52464008	5	-.53947492	6	-.55334910	5
2.35	-.50876428	7	-.52470071	5	-.53953223	4	-.55340345	4
2.36	-.50882858	5	-.52476129	6	-.53958950	5	-.55345776	4
2.37	-.50889283	6	-.52482181	4	-.53964672	4	-.55351203	4
2.38	-.50895702	5	-.52488229	6	-.53970390	6	-.55356626	5
2.39	-.50902116	7	-.52494271	5	-.53976102	3	-.55362044	4
2.40	-.50908523	5	-.52500308	5	-.53981811	6	-.55367458	4
2.41	-.50914925	5	-.52506340	5	-.53987514	4	-.55372868	4
2.42	-.50921322	7	-.52512367	6	-.53993213	5	-.55378274	5
2.43	-.50927712	5	-.52518388	4	-.53998907	4	-.55383675	4
2.44	-.50934097	6	-.52524405	5	-.54004597	5	-.55389072	4
2.45	-.50940476	5	-.52530417	6	-.54010282	5	-.55394465	4
2.46	-.50946850	6	-.52536423	5	-.54015962	4	-.55399854	4
2.47	-.50953218	6	-.52542424	4	-.54021638	5	-.55405239	4
2.48	-.50959580	5	-.52548421	6	-.54027309	4	-.55410620	5
2.49	-.50965937	6	-.52554412	5	-.54032976	5	-.55415996	4
2.50	-.50972288	0	-.52560398	0	-.54038638	0	-.55421368	0

LOG (G) FOR S=0.5

P	I=16		I=17		I=18		I=19	
0.	-.55299731	0	-.56596228	0	-.57819674	0	-.58977861	0
0.01	-.55306114	7	-.56602257	7	-.57825386	7	-.58983287	5
0.02	-.55312490	7	-.56608279	5	-.57831091	4	-.58988708	5
0.03	-.55318859	7	-.56614296	7	-.57836792	7	-.58994124	5
0.04	-.55325221	7	-.56620306	7	-.57842486	5	-.58999535	5
0.05	-.55331576	6	-.56626309	5	-.57848175	5	-.59004941	6
0.06	-.55337925	8	-.56632307	7	-.57853859	6	-.59010341	4
0.07	-.55344266	6	-.56638298	6	-.57859537	6	-.59015737	6
0.08	-.55350601	8	-.56644283	6	-.57865209	5	-.59021127	4
0.09	-.55356928	6	-.56650262	6	-.57870876	6	-.59026513	5
0.10	-.55363249	7	-.56656235	6	-.57876537	5	-.59031894	6
0.11	-.55369563	7	-.56662202	7	-.57882193	6	-.59037269	4
0.12	-.55375870	6	-.56668162	5	-.57887843	5	-.59042640	6
0.13	-.55382171	8	-.56674117	7	-.57893488	6	-.59048005	4
0.14	-.55388464	6	-.56680065	5	-.57899127	5	-.59053366	6
0.15	-.55394751	7	-.56686008	7	-.57904761	6	-.59058721	4
0.16	-.55401031	6	-.56691944	5	-.57910389	5	-.59064072	5
0.17	-.55407305	7	-.56697875	7	-.57916012	6	-.59069418	5
0.18	-.55413572	7	-.56703799	6	-.57921629	4	-.59074759	5
0.19	-.55419832	7	-.56709717	5	-.57927242	7	-.59080095	5
0.20	-.55426085	6	-.56715630	6	-.57932848	4	-.59085426	5
0.21	-.55432332	7	-.56721537	5	-.57938450	6	-.59090752	6
0.22	-.55438572	6	-.56727437	5	-.57944046	5	-.59096074	6
0.23	-.55444806	7	-.56733332	6	-.57949637	6	-.59101390	4
0.24	-.55451033	6	-.56739221	6	-.57955222	5	-.59106702	5
0.25	-.55457254	7	-.56745104	6	-.57960802	5	-.59112009	5
0.26	-.55463468	6	-.56750981	6	-.57966377	5	-.59117311	4
0.27	-.55469676	7	-.56756852	5	-.57971947	6	-.59122609	6
0.28	-.55475877	6	-.56762718	7	-.57977511	5	-.59127901	4
0.29	-.55482072	7	-.56768577	5	-.57983070	5	-.59133189	5
0.30	-.55488260	6	-.56774431	5	-.57988624	5	-.59138472	4
0.31	-.55494442	6	-.56780280	7	-.57994173	6	-.59143751	6
0.32	-.55500618	7	-.56786122	5	-.57999716	5	-.59149024	4
0.33	-.55506787	6	-.56791959	6	-.58005254	5	-.59154293	4
0.34	-.55512950	7	-.56797790	6	-.58010787	5	-.59159558	6
0.35	-.55519106	6	-.56803615	6	-.58016315	5	-.59164817	4
0.36	-.55525256	6	-.56809434	5	-.58021838	5	-.59170072	5
0.37	-.55531400	6	-.56815248	6	-.58027356	6	-.59175322	4
0.38	-.55537538	7	-.56821057	7	-.58032868	4	-.59180568	5
0.39	-.55543669	6	-.56826859	5	-.58038376	6	-.59185809	5
0.40	-.55549794	6	-.56832656	5	-.58043878	4	-.59191045	4
0.41	-.55555913	7	-.56838448	6	-.58049376	6	-.59196277	5
0.42	-.55562025	5	-.56844233	4	-.58054868	5	-.59201504	5
0.43	-.55568132	7	-.56850014	7	-.58060355	5	-.59206726	4
0.44	-.55574232	6	-.56855788	5	-.58065837	5	-.59211944	4
0.45	-.55580326	6	-.56861557	5	-.58071314	5	-.59217158	5
0.46	-.55586414	6	-.56867321	6	-.58076786	4	-.59222367	5
0.47	-.55592496	6	-.56873079	5	-.58082254	6	-.59227571	4
0.48	-.55598572	6	-.56878832	6	-.58087716	5	-.59232771	5
0.49	-.55604642	7	-.56884579	6	-.58093173	5	-.59237966	5
0.50	-.55610705	5	-.56890320	4	-.58098625	5	-.59243156	3

LOG (G) FOR S=0.5

G-214

P	I=16		I=17		I=18		I=19	
0.50	-.55610705	5	-.56890320	4	-.58098625	5	-.59243156	3
0.51	-.55616763	7	-.56896057	7	-.58104072	4	-.59248343	6
0.52	-.55622814	5	-.56901787	4	-.58109515	6	-.59253524	6
0.53	-.55628860	7	-.56907513	6	-.58114952	4	-.59258702	6
0.54	-.55634899	5	-.56913233	6	-.58120385	5	-.59263874	3
0.55	-.55640933	7	-.56918947	5	-.58125813	6	-.59269043	5
0.56	-.55646960	5	-.56924656	5	-.58131235	4	-.59274207	5
0.57	-.55652982	6	-.56930360	5	-.58136653	5	-.59279366	4
0.58	-.55658998	6	-.56936059	6	-.58142066	4	-.59284521	5
0.59	-.55665008	6	-.56941752	6	-.58147475	6	-.59289672	5
0.60	-.55671012	6	-.56947439	4	-.58152878	4	-.59294818	4
0.61	-.55677010	6	-.56953122	6	-.58158277	6	-.59299960	5
0.62	-.55683002	6	-.56958799	5	-.58163670	4	-.59305097	5
0.63	-.55688988	5	-.56964471	5	-.58169059	4	-.59310230	5
0.64	-.55694969	7	-.56970138	6	-.58174444	6	-.59315359	5
0.65	-.55700943	5	-.56975799	5	-.58179823	4	-.59320483	4
0.66	-.55706912	6	-.56981455	5	-.58185198	5	-.59325603	4
0.67	-.55712875	5	-.56987106	5	-.58190568	5	-.59330719	4
0.68	-.55718833	7	-.56992752	6	-.58195933	4	-.59335831	5
0.69	-.55724784	5	-.56998392	4	-.58201294	6	-.59340938	4
0.70	-.55730730	6	-.57004028	6	-.58206649	4	-.59346041	5
0.71	-.55736670	6	-.57009658	5	-.58212000	4	-.59351139	4
0.72	-.55742604	5	-.57015283	5	-.58217347	5	-.59356233	4
0.73	-.55748533	6	-.57020903	5	-.58222689	5	-.59361323	4
0.74	-.55754456	5	-.57026518	6	-.58228026	5	-.59366409	4
0.75	-.55760374	7	-.57032127	4	-.58233358	4	-.59371491	5
0.76	-.55766285	4	-.57037732	6	-.58238686	5	-.59376568	4
0.77	-.55772192	7	-.57043331	4	-.58244009	4	-.59381641	4
0.78	-.55778092	5	-.57048926	6	-.58249328	5	-.59386710	5
0.79	-.55783987	6	-.57054515	5	-.58254642	5	-.59391774	3
0.80	-.55789876	5	-.57060099	5	-.58259951	4	-.59396835	5
0.81	-.55795760	6	-.57065678	4	-.58265256	5	-.59401891	4
0.82	-.55801638	5	-.57071253	6	-.58270556	5	-.59406943	4
0.83	-.55807511	6	-.57076822	5	-.58275852	5	-.59411991	4
0.84	-.55813378	5	-.57082386	5	-.58281143	4	-.59417035	4
0.85	-.55819240	6	-.57087945	5	-.58286430	5	-.59422075	5
0.86	-.55825096	5	-.57093499	4	-.58291712	5	-.59427110	3
0.87	-.55830947	6	-.57099049	6	-.58296989	3	-.59432142	5
0.88	-.55836792	5	-.57104593	5	-.58302263	6	-.59437169	4
0.89	-.55842632	6	-.57110132	4	-.58307531	4	-.59442192	4
0.90	-.55848466	5	-.57115667	6	-.58312795	4	-.59447211	4
0.91	-.55854295	5	-.57121196	4	-.58318055	5	-.59452226	4
0.92	-.55860119	6	-.57126721	5	-.58323310	4	-.59457237	4
0.93	-.55865937	6	-.57132241	5	-.58328561	5	-.59462244	4
0.94	-.55871749	4	-.57137756	5	-.58333807	4	-.59467247	5
0.95	-.55877557	6	-.57143266	5	-.58339049	5	-.59472245	3
0.96	-.55883359	5	-.57148771	5	-.58344286	4	-.59477240	4
0.97	-.55889156	6	-.57154271	4	-.58349519	4	-.59482231	5
0.98	-.55894947	5	-.57159767	5	-.58354748	5	-.59487217	3
0.99	-.55900733	5	-.57165258	5	-.58359972	4	-.59492200	4
1.00	-.55906514	6	-.57170744	5	-.58365192	4	-.59497179	5

LOG (G) FOR S=0.5

P	I=16		I=17		I=18		I=19	
1.00	-.55906514	6	-.57170744	5	-.58365192	4	-.59497179	5
1.01	-.55912289	5	-.57176225	5	-.58370408	5	-.59502153	3
1.02	-.55918059	5	-.57181701	4	-.58375619	4	-.59507124	4
1.03	-.55923824	5	-.57187173	6	-.58380826	5	-.59512091	5
1.04	-.55929584	5	-.57192639	4	-.58386028	4	-.59517053	3
1.05	-.55935339	6	-.57198101	4	-.58391226	4	-.59522012	4
1.06	-.55941088	5	-.57203559	6	-.58396420	4	-.59526967	4
1.07	-.55946832	5	-.57209011	4	-.58401610	5	-.59531918	4
1.08	-.55952571	6	-.57214459	5	-.58406795	4	-.59536865	4
1.09	-.55958304	4	-.57219902	4	-.58411976	4	-.59541808	4
1.10	-.55964033	6	-.57225341	5	-.58417153	5	-.59546747	4
1.11	-.55969756	5	-.57230775	5	-.58422325	4	-.59551682	3
1.12	-.55975474	4	-.57236204	4	-.58427493	4	-.59556614	5
1.13	-.55981188	6	-.57241629	6	-.58432657	4	-.59561541	3
1.14	-.55986896	6	-.57247048	3	-.58437817	4	-.59566465	5
1.15	-.55992598	4	-.57252464	6	-.58442973	5	-.59571384	3
1.16	-.55998296	5	-.57257874	4	-.58448124	4	-.59576300	4
1.17	-.56003989	5	-.57263280	4	-.58453271	4	-.59581212	4
1.18	-.56009677	6	-.57268682	5	-.58458414	5	-.59586120	4
1.19	-.56015359	4	-.57274079	5	-.58463552	3	-.59591024	3
1.20	-.56021037	6	-.57279471	4	-.58468687	5	-.59595925	4
1.21	-.56026709	4	-.57284859	5	-.58473817	4	-.59600822	5
1.22	-.56032377	6	-.57290242	5	-.58478943	4	-.59605714	3
1.23	-.56038039	4	-.57295620	4	-.58484065	4	-.59610603	3
1.24	-.56043697	5	-.57300994	4	-.58489183	4	-.59615489	5
1.25	-.56049350	6	-.57306364	5	-.58494297	4	-.59620370	3
1.26	-.56054997	4	-.57311729	4	-.58499407	5	-.59625248	4
1.27	-.56060640	6	-.57317090	4	-.58504512	3	-.59630122	4
1.28	-.56066277	4	-.57322446	5	-.58509614	5	-.59634992	4
1.29	-.56071910	5	-.57327797	4	-.58514711	4	-.59639858	3
1.30	-.56077538	5	-.57333144	4	-.58519804	3	-.59644721	4
1.31	-.56083161	5	-.57338487	5	-.58524894	5	-.59649580	4
1.32	-.56088779	5	-.57343825	4	-.58529979	4	-.59654435	4
1.33	-.56094392	4	-.57349159	5	-.58535060	4	-.59659286	3
1.34	-.56100001	6	-.57354488	4	-.58540137	4	-.59664134	4
1.35	-.56105604	4	-.57359813	5	-.58545210	4	-.59668978	3
1.36	-.56111203	5	-.57365133	4	-.58550279	4	-.59673819	5
1.37	-.56116797	6	-.57370449	4	-.58555344	5	-.59678655	3
1.38	-.56122385	3	-.57375761	5	-.58560404	3	-.59683488	3
1.39	-.56127970	6	-.57381068	4	-.58565461	4	-.59688318	5
1.40	-.56133549	5	-.57386371	4	-.58570514	4	-.59693143	3
1.41	-.56139123	4	-.57391670	5	-.58575563	4	-.59697965	4
1.42	-.56144693	5	-.57396964	4	-.58580608	4	-.59702783	3
1.43	-.56150258	4	-.57402254	4	-.58585649	4	-.59707598	4
1.44	-.56155819	6	-.57407540	5	-.58590686	4	-.59712409	3
1.45	-.56161374	4	-.57412821	4	-.58595719	4	-.59717217	5
1.46	-.56166925	5	-.57418098	5	-.58600748	3	-.59722020	2
1.47	-.56172471	5	-.57423370	3	-.58605774	5	-.59726821	5
1.48	-.56178012	4	-.57428639	3	-.58610795	4	-.59731617	3
1.49	-.56183549	5	-.57433903	4	-.58615812	3	-.59736410	3
1.50	-.56189081	5	-.57439163	5	-.58620826	5	-.59741200	5

LOG (G) FOR S=0.5

P	I=16		I=17		I=18		I=19	
1.50	-.56189081	5	-.57439163	5	-.58620826	5	-.59741200	5
1.51	-.56194608	4	-.57444418	4	-.58625835	3	-.59745985	2
1.52	-.56200131	5	-.57449669	4	-.58630841	4	-.59750768	5
1.53	-.56205649	5	-.57454916	4	-.58635843	4	-.59755546	3
1.54	-.56211162	4	-.57460159	4	-.58640841	4	-.59760321	3
1.55	-.56216671	5	-.57465398	5	-.58645835	4	-.59765093	4
1.56	-.56222175	5	-.57470632	4	-.58650825	4	-.59769861	3
1.57	-.56227674	4	-.57475862	4	-.58655811	3	-.59774626	5
1.58	-.56233169	5	-.57481088	4	-.58660794	5	-.59779386	2
1.59	-.56238659	4	-.57486310	4	-.58665772	3	-.59784144	4
1.60	-.56244145	5	-.57491528	5	-.58670747	4	-.59788898	4
1.61	-.56249626	5	-.57496741	4	-.58675718	4	-.59793648	3
1.62	-.56255102	5	-.57501950	4	-.58680685	3	-.59798395	4
1.63	-.56260574	4	-.57507155	4	-.58685649	5	-.59803138	3
1.64	-.56266042	5	-.57512356	4	-.58690608	3	-.59807878	3
1.65	-.56271505	5	-.57517553	4	-.58695564	4	-.59812615	4
1.66	-.56276963	4	-.57522746	5	-.58700516	4	-.59817348	4
1.67	-.56282417	5	-.57527934	3	-.58705464	3	-.59822077	3
1.68	-.56287866	4	-.57533119	5	-.58710409	4	-.59826803	3
1.69	-.56293311	5	-.57538299	3	-.58715350	4	-.59831526	4
1.70	-.56298751	4	-.57543476	5	-.58720287	4	-.59836245	3
1.71	-.56304187	4	-.57548648	4	-.58725220	4	-.59840961	4
1.72	-.56309619	5	-.57553816	4	-.58730149	3	-.59845673	3
1.73	-.56315046	5	-.57558980	4	-.58735075	4	-.59850382	4
1.74	-.56320468	4	-.57564140	4	-.58739997	3	-.59855087	3
1.75	-.56325886	4	-.57569296	4	-.58744916	5	-.59859789	3
1.76	-.56331300	5	-.57574448	4	-.58749830	3	-.59864488	4
1.77	-.56336709	4	-.57579596	4	-.58754741	3	-.59869183	3
1.78	-.56342114	5	-.57584740	4	-.58759649	5	-.59873875	3
1.79	-.56347515	5	-.57589880	4	-.58764552	3	-.59878563	3
1.80	-.56352911	4	-.57595016	4	-.58769452	3	-.59883248	3
1.81	-.56358303	5	-.57600148	5	-.58774349	5	-.59887930	4
1.82	-.56363690	4	-.57605275	3	-.58779241	3	-.59892608	3
1.83	-.56369073	4	-.57610399	4	-.58784130	3	-.59897283	3
1.84	-.56374452	5	-.57615519	4	-.58789016	5	-.59901955	4
1.85	-.56379826	4	-.57620635	4	-.58793897	3	-.59906623	3
1.86	-.56385196	4	-.57625747	3	-.58798775	3	-.59911288	3
1.87	-.56390562	4	-.57630856	5	-.58803650	4	-.59915950	4
1.88	-.56395923	4	-.57635960	4	-.58808521	4	-.59920608	3
1.89	-.56401280	4	-.57641060	4	-.58813388	3	-.59925263	4
1.90	-.56406633	4	-.57646156	3	-.58818252	4	-.59929914	2
1.91	-.56411982	4	-.57651249	5	-.58823112	4	-.59934563	4
1.92	-.56417326	4	-.57656337	3	-.58827968	3	-.59939208	4
1.93	-.56422666	4	-.57661422	4	-.58832821	3	-.59943849	2
1.94	-.56428002	5	-.57666503	4	-.58837671	4	-.59948488	4
1.95	-.56433333	3	-.57671580	4	-.58842517	4	-.59953123	3
1.96	-.56438661	5	-.57676653	4	-.58847359	4	-.59957755	3
1.97	-.56443984	4	-.57681722	4	-.58852197	2	-.59962384	4
1.98	-.56449303	5	-.57686787	4	-.58857033	5	-.59967009	3
1.99	-.56454617	3	-.57691848	3	-.58861864	3	-.59971631	3
2.00	-.56459928	5	-.57696906	4	-.58866692	3	-.59976250	3

LOG(G) FOR S=0.5

P	I=16		I=17		I=18		I=19	
2.00	-.56459928	5	-.57696906	4	-.58866692	3	-.59976250	3
2.01	-.56465234	4	-.57701960	4	-.58871517	4	-.59980866	4
2.02	-.56470536	4	-.57707010	4	-.58876338	3	-.59985478	3
2.03	-.56475834	4	-.57712056	4	-.58881156	4	-.59990087	3
2.04	-.56481128	5	-.57717098	3	-.58885970	4	-.59994693	3
2.05	-.56486417	3	-.57722137	5	-.58890780	3	-.59999296	4
2.06	-.56491703	5	-.57727171	3	-.58895587	3	-.60003895	3
2.07	-.56496984	4	-.57732202	3	-.58900391	4	-.60008491	2
2.08	-.56502261	4	-.57737230	5	-.58905191	3	-.60013085	5
2.09	-.56507534	4	-.57742253	3	-.58909988	4	-.60017674	2
2.10	-.56512803	4	-.57747273	5	-.58914781	3	-.60022261	3
2.11	-.56518068	4	-.57752286	2	-.58919571	4	-.60026845	4
2.12	-.56523329	4	-.57757301	5	-.58924357	3	-.60031425	3
2.13	-.56528586	5	-.57762309	3	-.58929140	3	-.60036002	3
2.14	-.56533838	3	-.57767314	4	-.58933920	4	-.60040576	3
2.15	-.56539087	5	-.57772315	4	-.58938696	4	-.60045147	3
2.16	-.56544331	3	-.57777312	4	-.58943468	2	-.60049715	4
2.17	-.56549572	5	-.57782305	3	-.58948238	5	-.60054279	2
2.18	-.56554808	4	-.57787295	4	-.58953003	2	-.60058841	4
2.19	-.56560040	3	-.57792281	3	-.58957766	4	-.60063399	3
2.20	-.56565269	5	-.57797264	4	-.58962525	3	-.60067954	3
2.21	-.56570493	3	-.57802243	4	-.58967281	4	-.60072506	3
2.22	-.56575714	5	-.57807218	4	-.58972033	3	-.60077055	3
2.23	-.56580930	4	-.57812189	3	-.58976782	4	-.60081601	3
2.24	-.56586142	3	-.57817157	4	-.58981527	2	-.60086144	4
2.25	-.56591351	5	-.57822121	4	-.58986270	5	-.60090683	2
2.26	-.56596555	4	-.57827081	3	-.58991008	2	-.60095220	4
2.27	-.56601755	3	-.57832038	3	-.58995744	4	-.60099753	2
2.28	-.56606952	5	-.57836992	5	-.59000476	3	-.60104284	4
2.29	-.56612144	3	-.57841941	3	-.59005205	4	-.60108811	3
2.30	-.56617333	5	-.57846887	4	-.59009930	2	-.60113335	3
2.31	-.56622517	3	-.57851829	3	-.59014653	4	-.60117856	3
2.32	-.56627698	4	-.57856768	4	-.59019372	4	-.60122374	3
2.33	-.56632875	4	-.57861703	3	-.59024087	3	-.60126889	3
2.34	-.56638048	4	-.57866635	4	-.59028799	3	-.60131401	3
2.35	-.56643217	4	-.57871563	3	-.59033508	3	-.60135910	3
2.36	-.56648382	4	-.57876488	5	-.59038214	4	-.60140416	3
2.37	-.56653543	4	-.57881408	2	-.59042916	2	-.60144919	3
2.38	-.56658700	3	-.57886326	4	-.59047616	5	-.60149419	3
2.39	-.56663854	5	-.57891240	4	-.59052311	2	-.60153916	4
2.40	-.56669003	3	-.57896150	4	-.59057004	4	-.60158409	2
2.41	-.56674149	4	-.57901056	2	-.59061693	3	-.60162900	3
2.42	-.56679291	4	-.57905960	5	-.59066379	3	-.60167388	3
2.43	-.56684429	4	-.57910859	3	-.59071062	3	-.60171873	3
2.44	-.56689563	4	-.57915755	3	-.59075742	4	-.60176355	4
2.45	-.56694693	3	-.57920448	4	-.59080418	3	-.60180833	2
2.46	-.56699820	4	-.57925537	3	-.59085091	3	-.60185309	3
2.47	-.56704943	4	-.57930423	4	-.59089761	3	-.60189782	3
2.48	-.56710062	4	-.57935305	4	-.59094428	3	-.60194252	3
2.49	-.56715177	4	-.57940183	2	-.59099092	4	-.60198719	3
2.50	-.56720288	0	-.57945059	0	-.59103752	0	-.60203183	0

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LOG(G) FOR S=0.5

P	I=20		I=21		I=22		I=23	
0.00	-.60077400	0	-.61123943	0	-.62122365	0	-.63076897	0
0.01	-.60082567	3	-.61128876	4	-.62127084	5	-.63081419	3
0.02	-.60087731	6	-.61133405	5	-.62131798	3	-.63085938	2
0.03	-.60092889	4	-.61138729	3	-.62136509	4	-.63090452	2
0.04	-.60098043	5	-.61143650	3	-.62141216	4	-.63094964	4
0.05	-.60103192	4	-.61148566	4	-.62145919	3	-.63099472	4
0.06	-.60108337	5	-.61153478	5	-.62150619	5	-.63103976	4
0.07	-.60113477	4	-.61158385	3	-.62155314	4	-.63108476	2
0.08	-.60118613	6	-.61163289	5	-.62160005	3	-.63112974	3
0.09	-.60123743	3	-.61168188	4	-.62164693	4	-.63117467	3
0.10	-.60128870	5	-.61173083	4	-.62169377	4	-.63121957	3
0.11	-.60133992	5	-.61177974	4	-.62174057	4	-.63126444	4
0.12	-.60139109	4	-.61182861	4	-.62178733	3	-.63130927	4
0.13	-.60144222	5	-.61187744	4	-.62183406	3	-.63135406	2
0.14	-.60149330	4	-.61192622	3	-.62188074	3	-.63139883	5
0.15	-.60154434	5	-.61197497	5	-.62192739	4	-.63144355	3
0.16	-.60159533	4	-.61202367	4	-.62197400	3	-.63148824	4
0.17	-.60164628	5	-.61207233	4	-.62202058	5	-.63153290	3
0.18	-.60169718	4	-.61212095	4	-.62206711	3	-.63157752	3
0.19	-.60174804	5	-.61216953	4	-.62211361	4	-.63162211	4
0.20	-.60179885	4	-.61221807	4	-.62216007	3	-.63166666	3
0.21	-.60184962	4	-.61226657	4	-.62220650	3	-.63171118	4
0.22	-.60190035	4	-.61231503	4	-.62225288	3	-.63175566	3
0.23	-.60195103	5	-.61236345	4	-.62229923	4	-.63180011	3
0.24	-.60200166	3	-.61241183	4	-.62234554	3	-.63184453	4
0.25	-.60205226	5	-.61246017	3	-.62239182	4	-.63188891	3
0.26	-.60210281	3	-.61250846	4	-.62243806	4	-.63193326	4
0.27	-.60215331	3	-.61255672	4	-.62248426	4	-.63197757	3
0.28	-.60220378	6	-.61260494	4	-.62253042	3	-.63202185	3
0.29	-.60225419	3	-.61265312	4	-.62257655	3	-.63206610	4
0.30	-.60230457	5	-.61270126	4	-.62262265	5	-.63211031	3
0.31	-.60235490	4	-.61274936	4	-.62266870	3	-.63215449	3
0.32	-.60240519	4	-.61279742	4	-.62271472	4	-.63219864	4
0.33	-.60245544	5	-.61284544	4	-.62276070	3	-.63224275	3
0.34	-.60250564	4	-.61289342	4	-.62280665	4	-.63228683	3
0.35	-.60255580	4	-.61294136	4	-.62285256	3	-.63233087	2
0.36	-.60260592	4	-.61298926	3	-.62289844	4	-.63237489	4
0.37	-.60265600	5	-.61303713	5	-.62294428	3	-.63241887	2
0.38	-.60270603	4	-.61308495	3	-.62299008	3	-.63246281	2
0.39	-.60275602	4	-.61313274	5	-.62303585	4	-.63250673	4
0.40	-.60280597	4	-.61318048	3	-.62308158	3	-.63255061	2
0.41	-.60285588	5	-.61322819	4	-.62312728	4	-.63259445	4
0.42	-.60290574	4	-.61327586	4	-.62317294	4	-.63263827	2
0.43	-.60295556	4	-.61332349	3	-.62321856	3	-.63268205	3
0.44	-.60300534	4	-.61337109	5	-.62326415	3	-.63272580	3
0.45	-.60305508	4	-.61341864	3	-.62330971	4	-.63276952	4
0.46	-.60310478	5	-.61346616	4	-.62335523	4	-.63281320	3
0.47	-.60315443	3	-.61351364	4	-.62340071	3	-.63285685	3
0.48	-.60320405	5	-.61356108	4	-.62344616	3	-.63290047	3
0.49	-.60325362	4	-.61360848	4	-.62349158	4	-.63294406	4
0.50	-.60330315	4	-.61365584	3	-.62353696	4	-.63298761	2

LOG(G) FOR S=0.5

P	I=20		I=21		I=22		I=23	
0.50	-.60330315	4	-.61365584	3	-.62353696	4	-.63298761	2
0.51	-.60335264	4	-.61370317	4	-.62358230	3	-.63303114	4
0.52	-.60340209	4	-.61375046	4	-.62362761	3	-.63307463	4
0.53	-.60345150	4	-.61379771	3	-.62367289	4	-.63311809	4
0.54	-.60350087	4	-.61384493	5	-.62371813	3	-.63316151	2
0.55	-.60355020	5	-.61389210	3	-.62376334	4	-.63320491	4
0.56	-.60359948	3	-.61393924	3	-.62380851	3	-.63324827	3
0.57	-.60364873	5	-.61398635	5	-.62385365	4	-.63329160	3
0.58	-.60369793	3	-.61403341	3	-.62389875	3	-.63333490	3
0.59	-.60374710	5	-.61408044	4	-.62394382	3	-.63337817	3
0.60	-.60379622	3	-.61412743	4	-.62398886	4	-.63342141	4
0.61	-.60384531	5	-.61417438	4	-.62403386	4	-.63346461	2
0.62	-.60389435	3	-.61422130	4	-.62407882	2	-.63350779	4
0.63	-.60394336	5	-.61426818	3	-.62412376	4	-.63355093	3
0.64	-.60399232	3	-.61431503	5	-.62416866	4	-.63359404	3
0.65	-.60404125	5	-.61436183	3	-.62421352	2	-.63363712	3
0.66	-.60409013	3	-.61440860	3	-.62425836	4	-.63368017	3
0.67	-.60413898	5	-.61445534	4	-.62430316	4	-.63372319	3
0.68	-.60418770	3	-.61450204	4	-.62434792	3	-.63376618	4
0.69	-.60423655	4	-.61454870	3	-.62439265	3	-.63380913	2
0.70	-.60428528	4	-.61459533	4	-.62443735	3	-.63385206	4
0.71	-.60433397	4	-.61464192	4	-.62448202	4	-.63389495	3
0.72	-.60438262	4	-.61468847	3	-.62452665	3	-.63393781	2
0.73	-.60443123	4	-.61473499	4	-.62457125	3	-.63398065	4
0.74	-.60447980	4	-.61478147	3	-.62461582	4	-.63402345	3
0.75	-.60452833	4	-.61482792	4	-.62466035	3	-.63406622	3
0.76	-.60457682	3	-.61487433	4	-.62470485	3	-.63410896	3
0.77	-.60462528	5	-.61492070	3	-.62474932	4	-.63415167	3
0.78	-.60467369	3	-.61496704	3	-.62479375	3	-.63419435	3
0.79	-.60472207	4	-.61501335	5	-.62483815	3	-.63423700	3
0.80	-.60477041	4	-.61505961	2	-.62488252	3	-.63427962	3
0.81	-.60481871	4	-.61510585	4	-.62492686	4	-.63432221	3
0.82	-.60486697	3	-.61515205	4	-.62497116	3	-.63436477	3
0.83	-.60491520	5	-.61519821	3	-.62501543	3	-.63440730	3
0.84	-.60496338	3	-.61524434	4	-.62505967	3	-.63444980	3
0.85	-.60501153	4	-.61529043	3	-.62510388	4	-.63449227	3
0.86	-.60505964	3	-.61533649	4	-.62514805	2	-.63453471	3
0.87	-.60510772	5	-.61538251	3	-.62519220	4	-.63457712	3
0.88	-.60515575	3	-.61542850	4	-.62523631	3	-.63461950	3
0.89	-.60520375	4	-.61547445	3	-.62528039	4	-.63466185	3
0.90	-.60525171	4	-.61552037	3	-.62532443	2	-.63470417	3
0.91	-.60529963	4	-.61556626	4	-.62536845	4	-.63474646	2
0.92	-.60534751	3	-.61561211	4	-.62541243	3	-.63478873	4
0.93	-.60539536	4	-.61565792	2	-.62545638	3	-.63483096	3
0.94	-.60544317	3	-.61570371	5	-.62550030	3	-.63487316	2
0.95	-.60549095	5	-.61574945	2	-.62554419	4	-.63491534	4
0.96	-.60553868	3	-.61579517	4	-.62558804	2	-.63495748	3
0.97	-.60558638	4	-.61584085	4	-.62563187	4	-.63499959	2
0.98	-.60563404	3	-.61588649	3	-.62567566	3	-.63504168	3
0.99	-.60568167	4	-.61593210	3	-.62571942	3	-.63508374	3
1.00	-.60572926	4	-.61597768	4	-.62576315	3	-.63512577	4

LOG (G) FOR S=0.5

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P	I=20		I=21		I=22		I=23	
1.00	-.60572926	4	-.61597768	4	-.62576315	3	-.63512577	4
1.01	-.60577681	4	-.61602322	3	-.62580685	3	-.63516776	2
1.02	-.60582432	3	-.61606873	3	-.62585052	3	-.63520973	2
1.03	-.60587180	4	-.61611421	4	-.62589416	4	-.63525168	4
1.04	-.60591924	3	-.61615965	3	-.62593776	2	-.63529359	3
1.05	-.60596665	4	-.61620506	3	-.62598134	4	-.63533547	2
1.06	-.60601402	4	-.61625044	4	-.62602488	3	-.63537733	4
1.07	-.60606135	3	-.61629578	3	-.62606839	2	-.63541915	2
1.08	-.60610865	4	-.61634109	4	-.62611188	4	-.63546095	3
1.09	-.60615591	3	-.61638636	2	-.62615533	3	-.63550272	3
1.10	-.60620314	4	-.61643161	4	-.62619875	3	-.63554446	3
1.11	-.60625033	4	-.61647682	4	-.62624214	3	-.63558617	2
1.12	-.60629748	3	-.61652199	2	-.62628550	3	-.63562785	2
1.13	-.60634460	4	-.61656714	4	-.62632883	4	-.63566951	3
1.14	-.60639168	3	-.61661225	4	-.62637212	2	-.63571114	3
1.15	-.60643873	4	-.61665732	2	-.62641539	3	-.63575274	3
1.16	-.60648574	4	-.61670237	4	-.62645863	3	-.63579431	3
1.17	-.60653271	3	-.61674738	3	-.62650184	4	-.63583585	3
1.18	-.60657965	3	-.61679236	3	-.62654501	2	-.63587736	3
1.19	-.60662656	4	-.61683731	4	-.62658816	3	-.63591885	3
1.20	-.60667343	4	-.61688222	2	-.62663128	3	-.63596031	3
1.21	-.60672026	3	-.61692711	4	-.62667437	4	-.63600174	3
1.22	-.60676706	3	-.61697196	4	-.62671742	2	-.63604314	2
1.23	-.60681383	4	-.61701677	2	-.62676045	3	-.63608452	3
1.24	-.60686056	4	-.61706156	4	-.62680345	3	-.63612587	3
1.25	-.60690725	3	-.61710631	3	-.62684642	4	-.63616719	3
1.26	-.60695391	3	-.61715103	3	-.62688935	2	-.63620848	3
1.27	-.60700054	4	-.61719572	3	-.62693226	3	-.63624974	3
1.28	-.60704713	3	-.61724038	4	-.62697514	3	-.63629098	3
1.29	-.60709369	4	-.61728500	2	-.62701799	3	-.63633219	3
1.30	-.60714021	3	-.61732960	4	-.62706081	3	-.63637337	2
1.31	-.60718670	4	-.61737416	3	-.62710360	3	-.63641453	2
1.32	-.60723315	3	-.61741869	3	-.62714636	3	-.63645565	2
1.33	-.60727957	4	-.61746319	4	-.62718909	3	-.63649675	2
1.34	-.60732595	3	-.61750765	2	-.62723179	3	-.63653783	4
1.35	-.60737230	3	-.61755209	4	-.62727446	2	-.63657887	2
1.36	-.60741862	4	-.61759649	2	-.62731711	4	-.63661989	2
1.37	-.60746490	3	-.61764087	4	-.62735972	2	-.63666088	3
1.38	-.60751115	3	-.61768521	3	-.62740231	3	-.63670185	3
1.39	-.60755737	4	-.61772952	4	-.62744487	4	-.63674279	3
1.40	-.60760355	4	-.61777379	2	-.62748739	2	-.63678370	3
1.41	-.60764969	2	-.61781804	3	-.62752989	3	-.63682458	2
1.42	-.60769581	4	-.61786226	4	-.62757236	3	-.63686544	3
1.43	-.60774189	4	-.61790644	2	-.62761480	3	-.63690627	3
1.44	-.60778793	2	-.61795060	4	-.62765721	2	-.63694707	2
1.45	-.60783395	4	-.61799472	3	-.62769960	4	-.63698785	3
1.46	-.60787993	4	-.61803881	3	-.62774195	2	-.63702860	2
1.47	-.60792587	2	-.61808287	2	-.62778428	3	-.63706933	4
1.48	-.60797179	4	-.61812691	4	-.62782658	3	-.63711002	2
1.49	-.60801767	4	-.61817091	3	-.62786885	3	-.63715069	2
1.50	-.60806351	2	-.61821488	4	-.62791109	3	-.63719134	3

LOG(G) FOR S=0.5

P	I=20		I=21		I=22		I=23	
1.50	-.60806351	2	-.61821488	4	-.62791109	3	-.63719134	3
1.51	-.60810933	4	-.61825881	2	-.62795330	2	-.63723196	3
1.52	-.60815511	3	-.61830272	3	-.62799549	4	-.63727255	3
1.53	-.60820086	4	-.61834660	3	-.62803764	2	-.63731311	2
1.54	-.60824657	2	-.61839045	3	-.62807977	3	-.63735365	2
1.55	-.60829226	4	-.61843427	4	-.62812187	3	-.63739417	4
1.56	-.60833791	4	-.61847805	2	-.62816394	2	-.63743465	1
1.57	-.60838352	2	-.61852181	3	-.62820599	4	-.63747512	4
1.58	-.60842911	4	-.61856554	4	-.62824800	2	-.63751555	2
1.59	-.60847466	3	-.61860923	2	-.62828999	3	-.63755596	3
1.60	-.60852018	3	-.61865290	3	-.62833195	3	-.63759634	2
1.61	-.60856567	4	-.61869654	3	-.62837388	2	-.63763670	3
1.62	-.60861112	2	-.61874015	4	-.62841579	3	-.63767703	2
1.63	-.60865655	4	-.61878372	2	-.62845767	4	-.63771734	3
1.64	-.60870194	3	-.61882727	3	-.62849951	1	-.63775762	3
1.65	-.60874730	4	-.61887079	3	-.62854134	4	-.63779787	2
1.66	-.60879262	2	-.61891428	4	-.62858313	2	-.63783810	3
1.67	-.60883792	4	-.61895773	2	-.62862490	3	-.63787830	2
1.68	-.60888318	3	-.61900116	3	-.62866664	3	-.63791848	3
1.69	-.60892841	3	-.61904456	3	-.62870835	3	-.63795863	2
1.70	-.60897361	3	-.61908793	3	-.62875003	2	-.63799876	3
1.71	-.60901878	4	-.61913127	3	-.62879169	3	-.63803886	3
1.72	-.60906391	2	-.61917458	3	-.62883332	3	-.63807893	2
1.73	-.60910902	4	-.61921786	2	-.62887492	2	-.63811898	2
1.74	-.60915409	3	-.61926112	4	-.62891650	4	-.63815901	3
1.75	-.60919913	3	-.61930434	3	-.62895804	1	-.63819901	3
1.76	-.60924414	3	-.61934753	2	-.62899957	4	-.63823898	2
1.77	-.60928912	4	-.61939070	3	-.62904106	2	-.63827893	2
1.78	-.60933406	2	-.61943384	4	-.62908253	3	-.63831886	4
1.79	-.60937898	4	-.61947694	2	-.62912397	3	-.63835875	1
1.80	-.60942386	3	-.61952002	3	-.62916538	2	-.63839863	3
1.81	-.60946871	2	-.61956307	3	-.62920677	3	-.63843848	3
1.82	-.60951354	4	-.61960609	3	-.62924813	3	-.63847830	2
1.83	-.60955833	3	-.61964908	2	-.62928946	2	-.63851810	3
1.84	-.60960309	3	-.61969205	4	-.62933077	3	-.63855787	2
1.85	-.60964782	4	-.61973498	2	-.62937205	3	-.63859762	2
1.86	-.60969251	2	-.61977789	4	-.62941330	2	-.63863735	3
1.87	-.60973718	3	-.61982076	2	-.62945453	3	-.63867705	3
1.88	-.60978182	3	-.61986361	3	-.62949573	3	-.63871672	2
1.89	-.60982643	4	-.61990643	3	-.62953690	2	-.63875637	2
1.90	-.60987100	2	-.61994922	2	-.62957805	3	-.63879600	3
1.91	-.60991555	4	-.61999199	4	-.62961917	3	-.63883560	2
1.92	-.60996006	3	-.62003472	2	-.62966026	2	-.63887518	3
1.93	-.61000454	2	-.62007743	3	-.62970133	2	-.63891473	2
1.94	-.61004900	4	-.62012011	3	-.62974238	4	-.63895426	3
1.95	-.61009342	3	-.62016276	3	-.62978339	2	-.63899376	2
1.96	-.61013781	2	-.62020538	2	-.62982438	2	-.63903324	2
1.97	-.61018218	4	-.62024798	4	-.62986535	4	-.63907270	3
1.98	-.61022651	3	-.62029054	2	-.62990628	1	-.63911213	3
1.99	-.61027081	3	-.62033308	3	-.62994720	4	-.63915153	1
2.00	-.61031508	2	-.62037559	2	-.62998808	2	-.63919092	4

LOG(G) FOR S=0.5

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P	I=20		I=21		I=22		I=23	
2.00	-.61031508	2	-.62037559	2	-.62998808	2	-.63919092	4
2.01	-.61035933	4	-.62041808	4	-.63002894	2	-.63923027	1
2.02	-.61040354	3	-.62046053	1	-.63006978	3	-.63926961	1
2.03	-.61044772	3	-.62050296	3	-.63011059	3	-.63930892	3
2.04	-.61049187	2	-.62054536	3	-.63015137	2	-.63934820	1
2.05	-.61053600	4	-.62058773	2	-.63019213	3	-.63938747	4
2.06	-.61058009	3	-.62063008	1	-.63023286	3	-.63942670	1
2.07	-.61062415	3	-.62067240	1	-.63027356	2	-.63946592	3
2.08	-.61066819	4	-.62071469	3	-.63031424	2	-.63950511	3
2.09	-.61071219	2	-.62075695	3	-.63035490	3	-.63954427	1
2.10	-.61075617	4	-.62079918	2	-.63039553	3	-.63958342	3
2.11	-.61080011	2	-.62084139	3	-.63043613	3	-.63962254	2
2.12	-.61084403	3	-.62088357	3	-.63047671	3	-.63966163	2
2.13	-.61088792	4	-.62092572	3	-.63051726	3	-.63970070	2
2.14	-.61093177	2	-.62096785	3	-.63055779	3	-.63973975	3
2.15	-.61097560	3	-.62100995	3	-.63059829	2	-.63977877	1
2.16	-.61101940	3	-.62105202	2	-.63063877	3	-.63981778	4
2.17	-.61106317	3	-.62109407	4	-.63067922	2	-.63985675	1
2.18	-.61110691	3	-.62113604	2	-.63071965	3	-.63989571	1
2.19	-.61115062	2	-.62117807	2	-.63076005	2	-.63993464	3
2.20	-.61119431	4	-.62122004	4	-.63080043	3	-.63997354	1
2.21	-.61123796	2	-.62126197	2	-.63084078	2	-.64001243	3
2.22	-.61128159	4	-.62130388	2	-.63088111	3	-.64005129	2
2.23	-.61132518	3	-.62134577	3	-.63092141	3	-.64009013	3
2.24	-.61136875	3	-.62138763	3	-.63096169	3	-.64012894	2
2.25	-.61141229	3	-.62142946	3	-.63100194	3	-.64016773	2
2.26	-.61145580	3	-.62147126	2	-.63104216	1	-.64020650	3
2.27	-.61149928	3	-.62151304	2	-.63108237	3	-.64024524	2
2.28	-.61154273	2	-.62155479	3	-.63112255	3	-.64028396	2
2.29	-.61158616	3	-.62159651	2	-.63116270	2	-.64032266	2
2.30	-.61162956	4	-.62163821	3	-.63120283	3	-.64036134	3
2.31	-.61167292	2	-.62167988	3	-.63124293	2	-.64039999	2
2.32	-.61171626	3	-.62172152	3	-.63128301	2	-.64043862	3
2.33	-.61175957	2	-.62176314	3	-.63132307	3	-.64047722	1
2.34	-.61180286	4	-.62180473	2	-.63136310	3	-.64051581	3
2.35	-.61184611	2	-.62184630	3	-.63140310	2	-.64055437	2
2.36	-.61188934	3	-.62188784	3	-.63144308	2	-.64059291	3
2.37	-.61193254	3	-.62192935	2	-.63148304	3	-.64063142	2
2.38	-.61197571	3	-.62197084	3	-.63152297	2	-.64066991	2
2.39	-.61201885	3	-.62201230	2	-.63156288	2	-.64070838	2
2.40	-.61206196	2	-.62205374	3	-.63160277	3	-.64074683	2
2.41	-.61210505	3	-.62209515	3	-.63164263	2	-.64078526	3
2.42	-.61214811	3	-.62213653	2	-.63168247	3	-.64082366	2
2.43	-.61219114	3	-.62217789	2	-.63172228	2	-.64086204	3
2.44	-.61223414	2	-.62221922	2	-.63176207	3	-.64090039	1
2.45	-.61227712	3	-.62226053	3	-.63180183	2	-.64093873	3
2.46	-.61232007	3	-.62230181	3	-.63184157	2	-.64097704	2
2.47	-.61236299	3	-.62234306	2	-.63188129	3	-.64101533	2
2.48	-.61240588	2	-.62238429	2	-.63192098	2	-.64105360	3
2.49	-.61244875	4	-.62242550	3	-.63196065	3	-.64109184	1
2.50	-.61249158	0	-.62246668	0	-.63200029	0	-.64113007	0

LOG(G) FOR S=0.5

P	I=24		P	I=24		P	I=24	
0.	-.63991235	0	0.50	-.64204378	2	1.00	-.64410061	2
0.01	-.63995576	3	0.51	-.64208563	4	1.01	-.64414104	3
0.02	-.63999914	3	0.52	-.64212744	3	1.02	-.64418144	3
0.03	-.64004249	4	0.53	-.64216922	3	1.03	-.64422181	2
0.04	-.64008580	3	0.54	-.64221097	2	1.04	-.64426216	3
0.05	-.64012908	3	0.55	-.64225270	4	1.05	-.64430248	3
0.06	-.64017233	4	0.56	-.64229439	3	1.06	-.64434277	3
0.07	-.64021554	2	0.57	-.64233605	2	1.07	-.64438303	2
0.08	-.64025873	4	0.58	-.64237769	4	1.08	-.64442327	2
0.09	-.64030188	4	0.59	-.64241929	2	1.09	-.64446349	4
0.10	-.64034499	2	0.60	-.64246087	3	1.10	-.64450367	2
0.11	-.64038808	4	0.61	-.64250242	3	1.11	-.64454383	2
0.12	-.64043113	3	0.62	-.64254394	3	1.12	-.64458397	4
0.13	-.64047415	3	0.63	-.64258543	3	1.13	-.64462407	2
0.14	-.64051714	4	0.64	-.64262689	3	1.14	-.64466415	2
0.15	-.64056009	2	0.65	-.64266832	3	1.15	-.64470421	3
0.16	-.64060302	4	0.66	-.64270972	3	1.16	-.64474424	3
0.17	-.64064591	3	0.67	-.64275109	2	1.17	-.64478424	3
0.18	-.64068877	4	0.68	-.64279244	4	1.18	-.64482421	2
0.19	-.64073159	2	0.69	-.64283375	2	1.19	-.64486416	2
0.20	-.64077439	4	0.70	-.64287504	3	1.20	-.64490409	3
0.21	-.64081715	3	0.71	-.64291630	3	1.21	-.64494399	3
0.22	-.64085988	2	0.72	-.64295753	3	1.22	-.64498386	3
0.23	-.64090259	5	0.73	-.64299873	3	1.23	-.64502370	1
0.24	-.64094525	2	0.74	-.64303990	2	1.24	-.64506353	4
0.25	-.64098789	3	0.75	-.64308105	4	1.25	-.64510332	2
0.26	-.64103050	4	0.76	-.64312216	2	1.26	-.64514309	3
0.27	-.64107307	3	0.77	-.64316325	3	1.27	-.64518283	2
0.28	-.64111561	2	0.78	-.64320431	3	1.28	-.64522255	3
0.29	-.64115813	4	0.79	-.64324534	2	1.29	-.64526224	2
0.30	-.64120061	3	0.80	-.64328635	4	1.30	-.64530191	3
0.31	-.64124306	3	0.81	-.64332732	2	1.31	-.64534155	3
0.32	-.64128508	4	0.82	-.64336827	3	1.32	-.64538116	2
0.33	-.64132786	2	0.83	-.64340919	3	1.33	-.64542075	2
0.34	-.64137022	3	0.84	-.64345008	2	1.34	-.64546032	3
0.35	-.64141255	4	0.85	-.64349095	3	1.35	-.64549986	3
0.36	-.64145484	2	0.86	-.64353179	4	1.36	-.64553937	2
0.37	-.64149711	4	0.87	-.64357259	1	1.37	-.64557886	3
0.38	-.64153934	3	0.88	-.64361338	4	1.38	-.64561832	2
0.39	-.64158154	2	0.89	-.64365413	3	1.39	-.64565776	2
0.40	-.64162372	4	0.90	-.64369485	2	1.40	-.64569718	3
0.41	-.64166586	3	0.91	-.64373555	3	1.41	-.64573657	3
0.42	-.64170797	3	0.92	-.64377622	2	1.42	-.64577593	2
0.43	-.64175005	3	0.93	-.64381687	4	1.43	-.64581527	3
0.44	-.64179210	2	0.94	-.64385748	2	1.44	-.64585458	2
0.45	-.64183413	4	0.95	-.64389807	2	1.45	-.64589387	3
0.46	-.64187612	3	0.96	-.64393864	4	1.46	-.64593313	2
0.47	-.64191808	3	0.97	-.64397917	2	1.47	-.64597237	2
0.48	-.64196001	3	0.98	-.64401968	3	1.48	-.64601159	3
0.49	-.64200191	3	0.99	-.64406016	3	1.49	-.64605078	3
0.50	-.64204378	2	1.00	-.64410061	2	1.50	-.64608994	2

LOG(G) FOR S=0.5

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P	I=24		P	I=24	
1.50	-.64608994	2	2.00	-.64801772	1
1.51	-.64612908	2	2.01	-.64805569	3
1.52	-.64616820	3	2.02	-.64809363	2
1.53	-.64620729	2	2.03	-.64813155	3
1.54	-.64624636	3	2.04	-.64816944	1
1.55	-.64628540	2	2.05	-.64820732	3
1.56	-.64632442	3	2.06	-.64824517	2
1.57	-.64636341	2	2.07	-.64828300	3
1.58	-.64640238	2	2.08	-.64832080	1
1.59	-.64644133	3	2.09	-.64835859	3
1.60	-.64648025	2	2.10	-.64839635	2
1.61	-.64651915	3	2.11	-.64843409	2
1.62	-.64655802	2	2.12	-.64847181	3
1.63	-.64659687	3	2.13	-.64850950	1
1.64	-.64663569	2	2.14	-.64854718	3
1.65	-.64667449	2	2.15	-.64858483	2
1.66	-.64671327	3	2.16	-.64862246	3
1.67	-.64675202	2	2.17	-.64866006	1
1.68	-.64679075	2	2.18	-.64869765	3
1.69	-.64682946	3	2.19	-.64873521	1
1.70	-.64686814	2	2.20	-.64877276	3
1.71	-.64690680	3	2.21	-.64881028	3
1.72	-.64694543	2	2.22	-.64884777	1
1.73	-.64698404	2	2.23	-.64888525	3
1.74	-.64702263	3	2.24	-.64892270	1
1.75	-.64706119	2	2.25	-.64896014	3
1.76	-.64709973	2	2.26	-.64899755	2
1.77	-.64713825	3	2.27	-.64903494	3
1.78	-.64717674	2	2.28	-.64907230	1
1.79	-.64721521	2	2.29	-.64910965	2
1.80	-.64725366	3	2.30	-.64914698	3
1.81	-.64729208	2	2.31	-.64918428	2
1.82	-.64733048	3	2.32	-.64922156	2
1.83	-.64736885	1	2.33	-.64925882	2
1.84	-.64740721	3	2.34	-.64929606	2
1.85	-.64744554	3	2.35	-.64933328	3
1.86	-.64748384	1	2.36	-.64937047	1
1.87	-.64752213	3	2.37	-.64940765	3
1.88	-.64756039	3	2.38	-.64944480	2
1.89	-.64759862	1	2.39	-.64948193	1
1.90	-.64763684	3	2.40	-.64951905	3
1.91	-.64767503	2	2.41	-.64955614	3
1.92	-.64771320	3	2.42	-.64959320	1
1.93	-.64775134	2	2.43	-.64963025	2
1.94	-.64778946	2	2.44	-.64966728	3
1.95	-.64782756	2	2.45	-.64970428	1
1.96	-.64786564	3	2.46	-.64974127	3
1.97	-.64790369	1	2.47	-.64977823	1
1.98	-.64794173	3	2.48	-.64981518	3
1.99	-.64797974	3	2.49	-.64985210	2
2.00	-.64801772	1	2.50	-.64988900	0

LOG(G) FOR S=1.5

P	I=12	I=13	I=14	I=15
0.	0.90628185 0	0.92267227 0	0.93791223 0	0.95215267 0
0.01	0.90653222 -37	0.92290477 -32	0.93812924 -28	0.95235613 -26
0.02	0.90678222 -36	0.92313695 -32	0.93834597 -27	0.95255933 -23
0.03	0.90703186 -36	0.92336881 -31	0.93856243 -28	0.95276230 -25
0.04	0.90728114 -37	0.92360036 -31	0.93877861 -28	0.95296502 -24
0.05	0.90753005 -36	0.92383160 -32	0.93899451 -27	0.95316750 -24
0.06	0.90777860 -36	0.92406252 -31	0.93921014 -27	0.95336974 -24
0.07	0.90802679 -37	0.92429313 -31	0.93942550 -28	0.95357174 -24
0.08	0.90827461 -34	0.92452343 -31	0.93964058 -26	0.95377350 -25
0.09	0.90852209 -37	0.92475342 -31	0.93985540 -28	0.95397501 -23
0.10	0.90876920 -35	0.92498310 -31	0.94006994 -27	0.95417629 -24
0.11	0.90901596 -35	0.92521247 -31	0.94028421 -26	0.95437733 -23
0.12	0.90926237 -36	0.92544153 -30	0.94049822 -27	0.95457814 -24
0.13	0.90950842 -35	0.92567029 -31	0.94071196 -27	0.95477871 -24
0.14	0.90975412 -35	0.92589874 -30	0.94092543 -27	0.95497904 -23
0.15	0.90999947 -35	0.92612689 -30	0.94113863 -26	0.95517914 -24
0.16	0.91024447 -34	0.92635474 -30	0.94135157 -27	0.95537900 -23
0.17	0.91048913 -35	0.92658229 -31	0.94156424 -26	0.95557863 -24
0.18	0.91073344 -35	0.92680953 -30	0.94177665 -26	0.95577802 -23
0.19	0.91097740 -35	0.92703647 -29	0.94198880 -27	0.95597718 -22
0.20	0.91122101 -33	0.92726312 -31	0.94220068 -25	0.95617612 -24
0.21	0.91146429 -35	0.92748946 -29	0.94241231 -27	0.95637482 -23
0.22	0.91170722 -34	0.92771551 -30	0.94262367 -26	0.95657329 -24
0.23	0.91194981 -34	0.92794126 -29	0.94283477 -26	0.95677152 -21
0.24	0.91219206 -33	0.92816672 -30	0.94304561 -25	0.95696954 -24
0.25	0.91243398 -35	0.92839188 -29	0.94325620 -26	0.95716732 -23
0.26	0.91267555 -33	0.92861675 -29	0.94346653 -26	0.95736487 -22
0.27	0.91291679 -33	0.92884133 -29	0.94367660 -26	0.95756220 -23
0.28	0.91315770 -34	0.92906562 -30	0.94388641 -25	0.95775930 -23
0.29	0.91339827 -34	0.92928961 -28	0.94409597 -25	0.95795617 -22
0.30	0.91363850 -32	0.92951332 -30	0.94430528 -26	0.95815282 -23
0.31	0.91387841 -34	0.92973673 -28	0.94451433 -25	0.95834924 -22
0.32	0.91411798 -32	0.92995986 -29	0.94472313 -26	0.95854544 -22
0.33	0.91435723 -33	0.93018270 -28	0.94493167 -24	0.95874142 -22
0.34	0.91459615 -33	0.93040526 -29	0.94513997 -26	0.95893718 -23
0.35	0.91483474 -33	0.93062753 -29	0.94534801 -25	0.95913271 -22
0.36	0.91507300 -32	0.93084951 -27	0.94555580 -24	0.95932802 -22
0.37	0.91531094 -33	0.93107122 -29	0.94576335 -26	0.95952311 -23
0.38	0.91554855 -32	0.93129264 -29	0.94597064 -24	0.95971797 -21
0.39	0.91578584 -32	0.93151377 -27	0.94617769 -25	0.95991262 -22
0.40	0.91602281 -32	0.93173463 -28	0.94638449 -24	0.96010705 -22
0.41	0.91625946 -32	0.93195521 -28	0.94659105 -26	0.96030126 -21
0.42	0.91649579 -32	0.93217551 -29	0.94679735 -23	0.96049526 -23
0.43	0.91673180 -32	0.93239552 -26	0.94700342 -25	0.96068903 -21
0.44	0.91696749 -32	0.93261527 -29	0.94720924 -25	0.96088259 -22
0.45	0.91720286 -31	0.93283473 -27	0.94741481 -23	0.96107593 -21
0.46	0.91743792 -32	0.93305392 -27	0.94762015 -25	0.96126906 -22
0.47	0.91767266 -31	0.93327284 -28	0.94782524 -25	0.96146197 -21
0.48	0.91790709 -31	0.93349148 -28	0.94803008 -23	0.96165467 -22
0.49	0.91814121 -31	0.93370984 -26	0.94823469 -24	0.96184715 -21
0.50	0.91837502 -32	0.93392794 -28	0.94843906 -24	0.96203942 -21

LOG(G) FOR S=1.5

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P	I=12	I=13	I=14	I=15
0.50	0.91837502 -32	0.93392794 -28	0.94843906 -24	0.96203942 -21
0.51	0.91860851 -30	0.93414576 -27	0.94864319 -24	0.96223148 -21
0.52	0.91884170 -32	0.93436331 -26	0.94884708 -24	0.96242333 -22
0.53	0.91907457 -30	0.93458060 -28	0.94905073 -24	0.96261496 -21
0.54	0.91930714 -31	0.93479761 -27	0.94925414 -23	0.96280638 -20
0.55	0.91953940 -31	0.93501435 -26	0.94945732 -24	0.96299760 -22
0.56	0.91977135 -30	0.93523083 -27	0.94966026 -23	0.96318860 -21
0.57	0.92000300 -30	0.93544704 -27	0.94986297 -24	0.96337939 -20
0.58	0.92023435 -31	0.93566298 -26	0.95006544 -24	0.96356998 -22
0.59	0.92046539 -30	0.93587866 -26	0.95026767 -22	0.96376035 -20
0.60	0.92069613 -30	0.93609408 -27	0.95046968 -24	0.96395052 -21
0.61	0.92092657 -30	0.93630923 -27	0.95067145 -24	0.96414048 -20
0.62	0.92115671 -30	0.93652411 -25	0.95087298 -22	0.96433024 -21
0.63	0.92138655 -30	0.93673874 -27	0.95107429 -24	0.96451979 -21
0.64	0.92161609 -30	0.93695310 -26	0.95127536 -22	0.96470913 -20
0.65	0.92184533 -29	0.93716720 -25	0.95147621 -24	0.96489827 -21
0.66	0.92207428 -30	0.93738105 -27	0.95167682 -22	0.96508720 -20
0.67	0.92230293 -29	0.93759463 -25	0.95187721 -23	0.96527593 -21
0.68	0.92253129 -30	0.93780796 -27	0.95207737 -23	0.96546445 -19
0.69	0.92275935 -29	0.93802102 -25	0.95227730 -23	0.96565278 -21
0.70	0.92298712 -29	0.93823383 -25	0.95247700 -22	0.96584090 -20
0.71	0.92321460 -30	0.93844639 -26	0.95267648 -24	0.96602882 -21
0.72	0.92344178 -28	0.93865869 -26	0.95287572 -21	0.96621653 -19
0.73	0.92366868 -29	0.93887073 -25	0.95307475 -23	0.96640405 -20
0.74	0.92389529 -30	0.93908252 -25	0.95327355 -23	0.96659137 -21
0.75	0.92412160 -28	0.93929406 -26	0.95347212 -21	0.96677848 -19
0.76	0.92434763 -28	0.93950534 -25	0.95367048 -23	0.96696540 -20
0.77	0.92457338 -30	0.93971637 -25	0.95386861 -23	0.96715212 -20
0.78	0.92479883 -27	0.93992715 -25	0.95406651 -21	0.96733864 -20
0.79	0.92502401 -30	0.94013768 -25	0.95426420 -23	0.96752496 -19
0.80	0.92524889 -27	0.94034796 -24	0.95446166 -22	0.96771109 -20
0.81	0.92547350 -29	0.94055800 -26	0.95465890 -21	0.96789702 -20
0.82	0.92569782 -28	0.94076778 -25	0.95485593 -23	0.96808275 -19
0.83	0.92592186 -28	0.94097731 -24	0.95505273 -22	0.96826829 -20
0.84	0.92614562 -29	0.94118660 -25	0.95524931 -21	0.96845363 -20
0.85	0.92636909 -27	0.94139564 -24	0.95544568 -22	0.96863877 -19
0.86	0.92659229 -28	0.94160444 -25	0.95564183 -22	0.96882372 -19
0.87	0.92681521 -27	0.94181299 -24	0.95583776 -21	0.96900848 -19
0.88	0.92703786 -29	0.94202130 -25	0.95603348 -23	0.96919305 -20
0.89	0.92726022 -27	0.94222936 -24	0.95622897 -20	0.96937742 -19
0.90	0.92748231 -27	0.94243718 -24	0.95642426 -22	0.96956160 -19
0.91	0.92770413 -28	0.94264476 -24	0.95661933 -22	0.96974559 -20
0.92	0.92792567 -28	0.94285210 -24	0.95681418 -21	0.96992938 -18
0.93	0.92814693 -26	0.94305920 -25	0.95700882 -21	0.97011299 -20
0.94	0.92836793 -28	0.94326605 -23	0.95720325 -22	0.97029640 -18
0.95	0.92858865 -27	0.94347267 -25	0.95739746 -21	0.97047963 -20
0.96	0.92880910 -27	0.94367904 -23	0.95759146 -20	0.97066266 -18
0.97	0.92902928 -28	0.94388518 -24	0.95778526 -22	0.97084551 -20
0.98	0.92924918 -25	0.94409108 -23	0.95797884 -22	0.97102816 -18
0.99	0.92946883 -28	0.94429675 -25	0.95817220 -20	0.97121063 -19
1.00	0.92968820 -27	0.94450217 -22	0.95836536 -21	0.97139291 -18

LOG(G) FOR S=1.5

P	I=12	I=13	I=14	I=15
1.00	0.92968820 -27	0.94450217 -22	0.95836536 -21	0.97139291 -18
1.01	0.92990730 -26	0.94470737 -25	0.95855831 -20	0.97157501 -19
1.02	0.93012614 -27	0.94491232 -23	0.95875106 -22	0.97175692 -19
1.03	0.93034471 -26	0.94511704 -23	0.95894359 -21	0.97193864 -19
1.04	0.93056302 -27	0.94532153 -23	0.95913591 -20	0.97212017 -18
1.05	0.93078106 -26	0.94552579 -24	0.95932803 -21	0.97230152 -18
1.06	0.93099884 -27	0.94572981 -23	0.95951994 -20	0.97248269 -19
1.07	0.93121635 -25	0.94593360 -23	0.95971165 -21	0.97266367 -19
1.08	0.93143361 -27	0.94613716 -23	0.95990315 -21	0.97284446 -18
1.09	0.93165060 -26	0.94634049 -23	0.96009444 -20	0.97302507 -18
1.10	0.93186733 -26	0.94654359 -24	0.96028553 -21	0.97320550 -18
1.11	0.93208380 -26	0.94674645 -22	0.96047641 -20	0.97338575 -19
1.12	0.93230001 -26	0.94694909 -23	0.96066709 -20	0.97356581 -18
1.13	0.93251596 -25	0.94715150 -22	0.96085757 -20	0.97374369 -18
1.14	0.93273166 -26	0.94735369 -24	0.96104785 -21	0.97392539 -18
1.15	0.93294710 -26	0.94755564 -22	0.96123792 -20	0.97410491 -18
1.16	0.93316228 -26	0.94775737 -22	0.96142779 -20	0.97428425 -18
1.17	0.93337720 -25	0.94795888 -24	0.96161746 -20	0.97446341 -18
1.18	0.93359187 -25	0.94816015 -21	0.96180693 -20	0.97464239 -18
1.19	0.93380629 -26	0.94836121 -23	0.96199620 -20	0.97482119 -18
1.20	0.93402045 -25	0.94856204 -23	0.96218527 -20	0.97499981 -18
1.21	0.93423436 -25	0.94876264 -22	0.96237414 -20	0.97517825 -18
1.22	0.93444802 -26	0.94896302 -22	0.96256281 -19	0.97535651 -17
1.23	0.93466142 -24	0.94916318 -22	0.96275129 -21	0.97553460 -18
1.24	0.93487458 -26	0.94936312 -22	0.96293956 -19	0.97571251 -18
1.25	0.93508748 -24	0.94956284 -23	0.96312764 -19	0.97589024 -18
1.26	0.93530014 -26	0.94976233 -21	0.96331553 -21	0.97606779 -17
1.27	0.93551254 -24	0.94996161 -22	0.96350321 -19	0.97624517 -17
1.28	0.93572470 -25	0.95016067 -23	0.96369070 -19	0.97642238 -19
1.29	0.93593661 -25	0.95035950 -21	0.96387800 -20	0.97659940 -16
1.30	0.93614827 -24	0.95055812 -22	0.96406510 -20	0.97677626 -18
1.31	0.93635969 -25	0.95075652 -22	0.96425200 -19	0.97695294 -18
1.32	0.93657086 -24	0.95095470 -21	0.96443871 -19	0.97712944 -17
1.33	0.93678179 -25	0.95115267 -22	0.96462523 -19	0.97730577 -17
1.34	0.93699247 -24	0.95135042 -22	0.96481156 -20	0.97748193 -17
1.35	0.93720291 -25	0.95154795 -21	0.96499769 -19	0.97765792 -18
1.36	0.93741310 -23	0.95174527 -21	0.96518363 -19	0.97783373 -17
1.37	0.93762306 -25	0.95194238 -22	0.96536938 -19	0.97800937 -17
1.38	0.93783277 -24	0.95213927 -22	0.96555494 -19	0.97818484 -17
1.39	0.93804224 -24	0.95233594 -20	0.96574031 -20	0.97836014 -18
1.40	0.93825147 -24	0.95253241 -22	0.96592548 -18	0.97853526 -16
1.41	0.93846046 -24	0.95272866 -21	0.96611047 -19	0.97871022 -17
1.42	0.93866921 -24	0.95292470 -22	0.96629527 -19	0.97888501 -18
1.43	0.93887772 -23	0.95312052 -20	0.96647988 -19	0.97905962 -16
1.44	0.93908600 -24	0.95331614 -22	0.96666430 -19	0.97923407 -17
1.45	0.93929404 -24	0.95351154 -20	0.96684853 -18	0.97940835 -17
1.46	0.93950184 -24	0.95370674 -21	0.96703258 -20	0.97958246 -17
1.47	0.93970940 -23	0.95390173 -22	0.96721643 -17	0.97975640 -16
1.48	0.93991673 -23	0.95409650 -20	0.96740011 -20	0.97993018 -18
1.49	0.94012383 -24	0.95429107 -21	0.96758359 -18	0.98010378 -16
1.50	0.94033069 -24	0.95448543 -20	0.96776689 -18	0.98027722 -17

P

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LOG(G) FOR S=1.5

P	I=12	I=13	I=14	I=15
1.50	0.94033069 -24	0.95448543 -20	0.96776689 -18	0.98027722 -17
1.51	0.94053731 -22	0.95467959 -21	0.96795001 -19	0.98045049 -16
1.52	0.94074371 -24	0.95487354 -21	0.96813294 -19	0.98062360 -17
1.53	0.94094987 -23	0.95506728 -21	0.96831568 -18	0.98079654 -16
1.54	0.94115580 -23	0.95526081 -20	0.96849824 -18	0.98096932 -17
1.55	0.94136150 -23	0.95545414 -20	0.96868062 -19	0.98114193 -17
1.56	0.94156697 -24	0.95564727 -21	0.96886281 -18	0.98131437 -16
1.57	0.94177220 -22	0.95584019 -21	0.96904482 -18	0.98148665 -16
1.58	0.94197721 -23	0.95603290 -19	0.96922665 -18	0.98165877 -17
1.59	0.94218199 -23	0.95622542 -21	0.96940830 -18	0.98183072 -16
1.60	0.94238654 -22	0.95641773 -20	0.96958977 -19	0.98200251 -16
1.61	0.94259087 -24	0.95660984 -21	0.96977105 -17	0.98217414 -17
1.62	0.94279496 -22	0.95680174 -19	0.96995216 -19	0.98234560 -16
1.63	0.94299883 -22	0.95699345 -21	0.97013308 -18	0.98251690 -16
1.64	0.94320248 -23	0.95718495 -20	0.97031382 -17	0.98268804 -16
1.65	0.94340590 -23	0.95737625 -19	0.97049439 -19	0.98285902 -17
1.66	0.94360909 -22	0.95756736 -21	0.97067477 -17	0.98302983 -15
1.67	0.94381206 -22	0.95775826 -19	0.97085498 -18	0.98320049 -17
1.68	0.94401481 -23	0.95794897 -21	0.97103501 -18	0.98337098 -15
1.69	0.94421733 -22	0.95813947 -19	0.97121486 -18	0.98354132 -17
1.70	0.94441963 -22	0.95832978 -20	0.97139453 -17	0.98371149 -15
1.71	0.94462171 -22	0.95851989 -19	0.97157403 -18	0.98388151 -17
1.72	0.94482357 -23	0.95870981 -20	0.97175335 -18	0.98405136 -15
1.73	0.94502520 -21	0.95889953 -20	0.97193249 -17	0.98422106 -16
1.74	0.94522662 -23	0.95908905 -20	0.97211146 -18	0.98439060 -16
1.75	0.94542781 -21	0.95927837 -19	0.97229025 -17	0.98455998 -16
1.76	0.94562879 -22	0.95946750 -19	0.97246887 -18	0.98472920 -15
1.77	0.94582955 -22	0.95965644 -20	0.97264731 -17	0.98489827 -16
1.78	0.94603009 -22	0.95984518 -19	0.97282558 -17	0.98506718 -16
1.79	0.94623041 -22	0.96003373 -20	0.97300368 -18	0.98523593 -15
1.80	0.94643051 -21	0.96022208 -19	0.97318160 -17	0.98540453 -17
1.81	0.94663040 -22	0.96041024 -19	0.97335935 -18	0.98557296 -14
1.82	0.94683007 -21	0.96059821 -19	0.97353692 -17	0.98574125 -16
1.83	0.94702953 -22	0.96078599 -20	0.97371432 -16	0.98590938 -16
1.84	0.94722877 -21	0.96097357 -19	0.97389156 -18	0.98607735 -15
1.85	0.94742780 -22	0.96116096 -18	0.97406862 -17	0.98624517 -16
1.86	0.94762661 -21	0.96134817 -20	0.97424551 -18	0.98641283 -15
1.87	0.94782521 -21	0.96153518 -19	0.97442222 -16	0.98658034 -16
1.88	0.94802360 -21	0.96172200 -18	0.97459877 -17	0.98674769 -14
1.89	0.94822178 -22	0.96190864 -20	0.97477515 -17	0.98691490 -16
1.90	0.94841974 -21	0.96209508 -18	0.97495136 -17	0.98708195 -16
1.91	0.94861749 -21	0.96228134 -20	0.97512740 -18	0.98724884 -15
1.92	0.94881503 -21	0.96246740 -18	0.97530326 -15	0.98741558 -14
1.93	0.94901236 -21	0.96265328 -18	0.97547897 -18	0.98758218 -16
1.94	0.94920948 -21	0.96283898 -20	0.97565450 -17	0.98774862 -16
1.95	0.94940639 -21	0.96302448 -18	0.97582986 -16	0.98791490 -14
1.96	0.94960309 -20	0.96320980 -18	0.97600506 -17	0.98808104 -15
1.97	0.94979959 -22	0.96339494 -19	0.97618009 -16	0.98824703 -14
1.98	0.94999587 -20	0.96357989 -19	0.97635496 -17	0.98841286 -14
1.99	0.95019195 -20	0.96376465 -18	0.97652966 -17	0.98857855 -16
2.00	0.95038783 -22	0.96394923 -19	0.97670419 -17	0.98874408 -14

LOG(G) FOR S=1.5

P	I=12	I=13	I=14	I=15
2.00	0.95038783 -22	0.96394923 -19	0.97670419 -17	0.98874408 -14
2.01	0.95058349 -20	0.96413362 -18	0.97687855 -16	0.98890947 -16
2.02	0.95077895 -20	0.96431783 -18	0.97705275 -16	0.98907470 -14
2.03	0.95097421 -21	0.96450186 -19	0.97722679 -17	0.98923979 -15
2.04	0.95116926 -21	0.96468570 -18	0.97740066 -16	0.98940473 -16
2.05	0.95136410 -20	0.96486936 -18	0.97757437 -17	0.98956951 -13
2.06	0.95155874 -20	0.96505284 -18	0.97774791 -16	0.98973416 -16
2.07	0.95175318 -21	0.96523614 -18	0.97792129 -16	0.98989865 -14
2.08	0.95194741 -19	0.96541926 -19	0.97809451 -17	0.99006300 -16
2.09	0.95214145 -21	0.96560219 -18	0.97826756 -15	0.99022719 -13
2.10	0.95233528 -20	0.96578494 -17	0.97844046 -17	0.99039125 -16
2.11	0.95252891 -21	0.96596752 -19	0.97861319 -17	0.99055515 -14
2.12	0.95272233 -19	0.96614991 -17	0.97878575 -15	0.99071891 -15
2.13	0.95291556 -20	0.96633213 -19	0.97895816 -16	0.99088252 -14
2.14	0.95310859 -21	0.96651416 -17	0.97913041 -17	0.99104599 -15
2.15	0.95330141 -19	0.96669602 -18	0.97930249 -15	0.99120931 -14
2.16	0.95349404 -20	0.96687770 -18	0.97947442 -17	0.99137249 -15
2.17	0.95368647 -20	0.96705920 -17	0.97964618 -16	0.99153552 -14
2.18	0.95387870 -19	0.96724053 -19	0.97981778 -15	0.99169841 -15
2.19	0.95407074 -21	0.96742167 -17	0.97998923 -16	0.99186115 -14
2.20	0.95426257 -19	0.96760264 -17	0.98016052 -17	0.99202375 -15
2.21	0.95445421 -20	0.96778344 -18	0.98033164 -15	0.99218620 -14
2.22	0.95464565 -19	0.96796406 -18	0.98050261 -16	0.99234851 -14
2.23	0.95483690 -20	0.96814450 -17	0.98067342 -15	0.99251068 -14
2.24	0.95502795 -19	0.96832477 -18	0.98084408 -17	0.99267271 -15
2.25	0.95521881 -20	0.96850486 -17	0.98101457 -15	0.99283459 -14
2.26	0.95540947 -19	0.96868478 -18	0.98118491 -16	0.99299633 -14
2.27	0.95559994 -20	0.96886452 -17	0.98135509 -15	0.99315793 -14
2.28	0.95579021 -19	0.96904409 -17	0.98152512 -16	0.99331939 -15
2.29	0.95598029 -19	0.96922349 -17	0.98169499 -16	0.99348070 -13
2.30	0.95617018 -20	0.96940272 -18	0.98186470 -15	0.99364188 -15
2.31	0.95635987 -18	0.96958177 -17	0.98203426 -15	0.99380291 -14
2.32	0.95654938 -20	0.96976065 -17	0.98220367 -16	0.99396380 -13
2.33	0.95673869 -19	0.96993936 -17	0.98237292 -16	0.99412456 -15
2.34	0.95692781 -19	0.97011790 -17	0.98254201 -15	0.99428517 -14
2.35	0.95711674 -20	0.97029627 -18	0.98271095 -15	0.99444564 -13
2.36	0.95730547 -18	0.97047446 -16	0.98287974 -16	0.99460598 -15
2.37	0.95749402 -19	0.97065249 -17	0.98304837 -15	0.99476617 -13
2.38	0.95768238 -19	0.97083035 -18	0.98321685 -15	0.99492623 -14
2.39	0.95787055 -18	0.97100803 -16	0.98338518 -16	0.99508615 -15
2.40	0.95805854 -20	0.97118555 -17	0.98355335 -15	0.99524592 -13
2.41	0.95824633 -18	0.97136290 -17	0.98372137 -15	0.99540556 -13
2.42	0.95843394 -19	0.97154008 -17	0.98388924 -15	0.99556507 -15
2.43	0.95862136 -19	0.97171709 -14	0.98405696 -15	0.99572443 -13
2.44	0.95880859 -19	0.97189394 -17	0.98422453 -15	0.99588366 -14
2.45	0.95899563 -18	0.97207062 -17	0.98439195 -16	0.99604275 -13
2.46	0.95918249 -18	0.97224713 -17	0.98455921 -14	0.99620171 -15
2.47	0.95936917 -19	0.97242347 -16	0.98472633 -16	0.99636052 -12
2.48	0.95955566 -19	0.97259965 -17	0.98489329 -14	0.99651921 -15
2.49	0.95974196 -18	0.97277566 -16	0.98506011 -16	0.99667775 -13
2.50	0.95992808 0	0.97295151 0	0.98522677 0	0.99683616 0

LOG(G) FOR S=1.5

G-214

P	I=16	I=17	I=18	I=19
0.	0.96551663 0	0.97810576 0	0.99000498 0	1.00128599 0
0.01	0.96570813 -23	0.97828662 -20	0.99017633 -18	1.00144878 -17
0.02	0.96589940 -21	0.97846728 -19	0.99034750 -17	1.00161140 -15
0.03	0.96609046 -22	0.97864776 -20	0.99051850 -18	1.00177387 -16
0.04	0.96628130 -21	0.97882804 -20	0.99068932 -17	1.00193618 -16
0.05	0.96647193 -22	0.97900812 -18	0.99085997 -17	1.00209833 -15
0.06	0.96666234 -21	0.97918802 -20	0.99103045 -18	1.00226033 -16
0.07	0.96685254 -21	0.97936772 -19	0.99120075 -17	1.00242217 -16
0.08	0.96704253 -22	0.97954723 -19	0.99137088 -16	1.00258385 -14
0.09	0.96723230 -21	0.97972655 -18	0.99154085 -18	1.00274539 -17
0.10	0.96742186 -21	0.97990569 -20	0.99171064 -17	1.00290676 -15
0.11	0.96761121 -21	0.98008463 -19	0.99188026 -17	1.00306798 -15
0.12	0.96780035 -21	0.98026338 -18	0.99204971 -17	1.00322905 -15
0.13	0.96798928 -21	0.98044195 -19	0.99221899 -17	1.00338997 -16
0.14	0.96817800 -22	0.98062033 -19	0.99238810 -16	1.00355073 -15
0.15	0.96836650 -20	0.98079852 -19	0.99255705 -18	1.00371134 -16
0.16	0.96855480 -20	0.98097652 -18	0.99272582 -16	1.00387179 -14
0.17	0.96874290 -22	0.98115434 -19	0.99289443 -17	1.00403210 -16
0.18	0.96893078 -20	0.98133197 -19	0.99306287 -17	1.00419225 -15
0.19	0.96911846 -21	0.98150941 -18	0.99323114 -16	1.00435225 -15
0.20	0.96930593 -20	0.98168667 -18	0.99339925 -17	1.00451210 -15
0.21	0.96949320 -21	0.98186375 -19	0.99356719 -17	1.00467180 -15
0.22	0.96968026 -21	0.98204064 -18	0.99373496 -16	1.00483135 -15
0.23	0.96986711 -20	0.98221735 -18	0.99390257 -17	1.00499075 -15
0.24	0.97005376 -20	0.98239388 -19	0.99407001 -16	1.00515000 -15
0.25	0.97024021 -20	0.98257022 -18	0.99423729 -17	1.00530910 -14
0.26	0.97042646 -21	0.98274638 -18	0.99440440 -16	1.00546806 -16
0.27	0.97061250 -20	0.98292236 -18	0.99457135 -16	1.00562686 -14
0.28	0.97079834 -20	0.98309816 -18	0.99473814 -17	1.00578552 -16
0.29	0.97098398 -21	0.98327378 -19	0.99490476 -15	1.00594402 -14
0.30	0.97116941 -19	0.98344921 -17	0.99507123 -17	1.00610238 -14
0.31	0.97135465 -20	0.98362447 -18	0.99523753 -17	1.00626060 -16
0.32	0.97153969 -20	0.98379955 -18	0.99540366 -15	1.00641866 -14
0.33	0.97172453 -20	0.98397445 -18	0.99556964 -17	1.00657658 -15
0.34	0.97190917 -20	0.98414917 -18	0.99573545 -15	1.00673435 -14
0.35	0.97209361 -20	0.98432371 -17	0.99590111 -17	1.00689198 -15
0.36	0.97227785 -19	0.98449808 -18	0.99606660 -16	1.00704946 -14
0.37	0.97246190 -20	0.98467227 -18	0.99623193 -15	1.00720680 -15
0.38	0.97264575 -20	0.98484628 -18	0.99639711 -17	1.00736399 -14
0.39	0.97282940 -19	0.98502011 -17	0.99656212 -15	1.00752104 -15
0.40	0.97301286 -20	0.98519377 -17	0.99672698 -16	1.00767794 -14
0.41	0.97319612 -19	0.98536726 -19	0.99689168 -16	1.00783470 -14
0.42	0.97337919 -20	0.98554056 -16	0.99705622 -16	1.00799132 -15
0.43	0.97356206 -19	0.98571370 -18	0.99722060 -16	1.00814779 -14
0.44	0.97374474 -19	0.98588666 -17	0.99738482 -15	1.00830412 -14
0.45	0.97392723 -20	0.98605945 -18	0.99754889 -16	1.00846031 -15
0.46	0.97410952 -19	0.98623206 -17	0.99771280 -15	1.00861635 -13
0.47	0.97429162 -19	0.98640450 -17	0.99787656 -17	1.00877226 -15
0.48	0.97447353 -19	0.98657677 -17	0.99804015 -14	1.00892802 -14
0.49	0.97465525 -19	0.98674887 -18	0.99820360 -16	1.00908364 -14
0.50	0.97483678 -19	0.98692079 -17	0.99836689 -16	1.00923912 -14

LOG(G) FOR S=1.5

P	I=16	I=17	I=18	I=19
0.50	0.97483678 -19	0.98692079 -17	0.99836689 -16	1.00923912 -14
0.51	0.97501812 -20	0.98709254 -16	0.99853002 -15	1.00939446 -14
0.52	0.97519926 -18	0.98726413 -18	0.99869300 -16	1.00954966 -15
0.53	0.97538022 -19	0.98743554 -17	0.99885582 -14	1.00970471 -13
0.54	0.97556099 -19	0.98760678 -16	0.99901850 -17	1.00985963 -14
0.55	0.97574157 -18	0.98777786 -18	0.99918101 -14	1.01001441 -14
0.56	0.97592197 -19	0.98794876 -16	0.99934338 -16	1.01016905 -14
0.57	0.97610218 -20	0.98811950 -18	0.99950559 -15	1.01032355 -13
0.58	0.97628219 -17	0.98829006 -16	0.99966765 -15	1.01047792 -15
0.59	0.97646203 -19	0.98846046 -17	0.99982956 -15	1.01063214 -13
0.60	0.97664168 -19	0.98863069 -16	0.99999132 -16	1.01078623 -14
0.61	0.97682114 -19	0.98880076 -17	1.00015292 -15	1.01094018 -14
0.62	0.97700041 -17	0.98897066 -17	1.00031437 -14	1.01109399 -14
0.63	0.97717951 -20	0.98914039 -17	1.00047568 -16	1.01124766 -13
0.64	0.97735841 -17	0.98930995 -15	1.00063683 -14	1.01140120 -14
0.65	0.97753714 -19	0.98947936 -18	1.00079784 -16	1.01155460 -13
0.66	0.97771568 -18	0.98964859 -16	1.00095869 -15	1.01170787 -14
0.67	0.97789404 -19	0.98981766 -16	1.00111939 -14	1.01186100 -14
0.68	0.97807221 -17	0.98998657 -17	1.00127995 -15	1.01201399 -13
0.69	0.97825021 -19	0.99015531 -16	1.00144036 -15	1.01216685 -14
0.70	0.97842802 -18	0.99032389 -17	1.00160062 -15	1.01231957 -13
0.71	0.97860565 -18	0.99049230 -15	1.00176073 -15	1.01247216 -13
0.72	0.97878310 -18	0.99066056 -17	1.00192069 -14	1.01262462 -14
0.73	0.97896037 -17	0.99082865 -16	1.00208051 -15	1.01277694 -14
0.74	0.97913747 -19	0.99099658 -17	1.00224018 -15	1.01292912 -12
0.75	0.97931438 -18	0.99116434 -15	1.00239970 -14	1.01308118 -14
0.76	0.97949111 -17	0.99133195 -17	1.00255908 -15	1.01323310 -14
0.77	0.97966767 -19	0.99149939 -15	1.00271831 -15	1.01338488 -12
0.78	0.97984404 -17	0.99166668 -17	1.00287739 -14	1.01353654 -14
0.79	0.98002024 -17	0.99183380 -15	1.00303633 -14	1.01368806 -13
0.80	0.98019627 -19	0.99200077 -17	1.00319513 -15	1.01383945 -13
0.81	0.98037211 -17	0.99216757 -15	1.00335378 -15	1.01399071 -13
0.82	0.98054778 -17	0.99233422 -17	1.00351228 -13	1.01414184 -14
0.83	0.98072328 -18	0.99250070 -15	1.00367065 -16	1.01429283 -12
0.84	0.98089860 -18	0.99266703 -16	1.00382886 -13	1.01444370 -14
0.85	0.98107374 -17	0.99283320 -15	1.00398694 -15	1.01459443 -13
0.86	0.98124871 -18	0.99299922 -17	1.00414487 -14	1.01474503 -12
0.87	0.98142350 -16	0.99316507 -15	1.00430266 -14	1.01489551 -14
0.88	0.98159813 -19	0.99333077 -16	1.00446031 -15	1.01504585 -13
0.89	0.98177257 -16	0.99349631 -15	1.00461781 -14	1.01519606 -12
0.90	0.98194685 -18	0.99366170 -16	1.00477517 -14	1.01534615 -14
0.91	0.98212095 -17	0.99382693 -16	1.00493239 -14	1.01549610 -12
0.92	0.98229488 -17	0.99399200 -15	1.00508947 -14	1.01564593 -14
0.93	0.98246864 -17	0.99415692 -15	1.00524641 -14	1.01579562 -12
0.94	0.98264223 -17	0.99432169 -16	1.00540321 -14	1.01594519 -12
0.95	0.98281565 -18	0.99448630 -16	1.00555987 -14	1.01609464 -14
0.96	0.98298889 -16	0.99465075 -14	1.00571639 -14	1.01624395 -13
0.97	0.98316197 -17	0.99481506 -17	1.00587277 -15	1.01639313 -12
0.98	0.98333488 -17	0.99497920 -14	1.00602900 -13	1.01654219 -13
0.99	0.98350762 -18	0.99514320 -16	1.00618510 -13	1.01669112 -12
1.00	0.98368018 -16	0.99530704 -15	1.00634107 -15	1.01683993 -13

LOG(G) FOR S=1.5

G-214

P	I=16	I=17	I=18	I=19
1.00	0.98368018 −16	0.99530704 −15	1.00634107 −15	1.01683993 −13
1.01	0.98385258 −16	0.99547073 −15	1.00649689 −14	1.01698861 −13
1.02	0.98402482 −18	0.99563427 −15	1.00665257 −13	1.01713716 −12
1.03	0.98419688 −16	0.99579766 −15	1.00680812 −14	1.01728559 −13
1.04	0.98436878 −17	0.99596090 −16	1.00696353 −14	1.01743389 −13
1.05	0.98454051 −17	0.99612398 −15	1.00711880 −14	1.01758206 −12
1.06	0.98471207 −16	0.99628691 −14	1.00727393 −13	1.01773011 −16
1.07	0.98488347 −17	0.99644970 −16	1.00742893 −14	1.01787804 −13
1.08	0.98505470 −16	0.99661233 −15	1.00758379 −13	1.01802584 −13
1.09	0.98522577 −17	0.99677481 −14	1.00773851 −13	1.01817351 −12
1.10	0.98539667 −16	0.99693715 −16	1.00789310 −13	1.01832106 −12
1.11	0.98556741 −17	0.99709933 −14	1.00804756 −15	1.01846849 −12
1.12	0.98573798 −16	0.99726137 −15	1.00820187 −12	1.01861580 −13
1.13	0.98590839 −17	0.99742326 −15	1.00835606 −15	1.01876298 −13
1.14	0.98607863 −16	0.99758500 −15	1.00851010 −12	1.01891003 −11
1.15	0.98624871 −16	0.99774659 −15	1.00866402 −14	1.01905697 −13
1.16	0.98641863 −16	0.99790803 −14	1.00881780 −14	1.01920378 −12
1.17	0.98658839 −17	0.99806933 −15	1.00897144 −13	1.01935047 −12
1.18	0.98675798 −15	0.99823048 −14	1.00912495 −13	1.01949704 −13
1.19	0.98692742 −17	0.99839149 −16	1.00927833 −13	1.01964348 −12
1.20	0.98709669 −16	0.99855234 −13	1.00943158 −14	1.01978980 −11
1.21	0.98726580 −16	0.99871306 −16	1.00958469 −13	1.01993601 −13
1.22	0.98743475 −16	0.99887362 −14	1.00973767 −14	1.02008209 −12
1.23	0.98760354 −16	0.99903404 −14	1.00989051 −12	1.02022805 −12
1.24	0.98777217 −16	0.99919432 −15	1.01004323 −14	1.02037389 −13
1.25	0.98794064 −16	0.99935445 −14	1.01019581 −12	1.02051960 −11
1.26	0.98810895 −16	0.99951444 −15	1.01034827 −14	1.02066520 −12
1.27	0.98827710 −16	0.99967428 −14	1.01050059 −13	1.02081068 −12
1.28	0.98844509 −15	0.99983398 −14	1.01065278 −14	1.02095604 −12
1.29	0.98861293 −16	0.99999354 −15	1.01080483 −12	1.02110128 −13
1.30	0.98878061 −16	1.00015295 −14	1.01095676 −13	1.02124639 −11
1.31	0.98894813 −16	1.00031222 −14	1.01110856 −13	1.02139139 −11
1.32	0.98911549 −15	1.00047135 −15	1.01126023 −13	1.02153628 −13
1.33	0.98928270 −16	1.00063033 −14	1.01141177 −13	1.02168104 −12
1.34	0.98944975 −16	1.00078917 −13	1.01156318 −13	1.02182568 −11
1.35	0.98961664 −15	1.00094788 −15	1.01171446 −13	1.02197021 −13
1.36	0.98978338 −16	1.00110644 −14	1.01186561 −13	1.02211461 −11
1.37	0.98994996 −15	1.00126486 −15	1.01201663 −12	1.02225890 −11
1.38	0.99011639 −16	1.00142313 −13	1.01216753 −14	1.02240308 −13
1.39	0.99028266 −15	1.00158127 −14	1.01231829 −12	1.02254713 −11
1.40	0.99044878 −15	1.00173927 −14	1.01246893 −13	1.02269107 −12
1.41	0.99061475 −16	1.00189713 −14	1.01261944 −12	1.02283489 −11
1.42	0.99078056 −15	1.00205485 −14	1.01276983 −14	1.02297860 −13
1.43	0.99094622 −16	1.00221243 −14	1.01292008 −12	1.02312218 −10
1.44	0.99111172 −15	1.00236987 −14	1.01307021 −12	1.02326566 −13
1.45	0.99127707 −15	1.00252717 −14	1.01322022 −14	1.02340901 −11
1.46	0.99144227 −15	1.00268433 −13	1.01337009 −11	1.02355225 −11
1.47	0.99160732 −15	1.00284136 −15	1.01351985 −14	1.02369538 −12
1.48	0.99177222 −16	1.00299824 −13	1.01366947 −12	1.02383839 −12
1.49	0.99193696 −14	1.00315499 −13	1.01381897 −13	1.02398128 −11
1.50	0.99210156 −16	1.00331161 −15	1.01396834 −12	1.02412406 −12

LOG(G) FOR S=1.5

P	I=16	I=17	I=18	I=19
1.50	0.99210156 -16	1.00331161 -15	1.01396834 -12	1.02412406 -12
1.51	0.99226600 -15	1.00346808 -13	1.01411759 -12	1.02426672 -10
1.52	0.99243029 -15	1.00362442 -14	1.01426672 -13	1.02440928 -13
1.53	0.99259443 -14	1.00378062 -13	1.01441572 -13	1.02455171 -11
1.54	0.99275843 -16	1.00393669 -14	1.01456459 -12	1.02469403 -11
1.55	0.99292227 -15	1.00409262 -14	1.01471334 -12	1.02483624 -11
1.56	0.99308596 -14	1.00424841 -13	1.01486197 -12	1.02497834 -12
1.57	0.99324951 -15	1.00440407 -13	1.01501048 -13	1.02512032 -11
1.58	0.99341291 -16	1.00455960 -14	1.01515886 -13	1.02526219 -12
1.59	0.99357615 -13	1.00471499 -14	1.01530711 -11	1.02540394 -10
1.60	0.99373926 -16	1.00487024 -13	1.01545525 -13	1.02554559 -12
1.61	0.99390221 -15	1.00502536 -13	1.01560326 -12	1.02568712 -12
1.62	0.99406501 -14	1.00518035 -14	1.01575115 -12	1.02582853 -10
1.63	0.99422767 -14	1.00533520 -13	1.01589892 -13	1.02596984 -12
1.64	0.99439019 -16	1.00548992 -13	1.01604656 -11	1.02611103 -10
1.65	0.99455255 -14	1.00564451 -14	1.01619409 -13	1.02625212 -12
1.66	0.99471477 -15	1.00579896 -13	1.01634149 -12	1.02639309 -11
1.67	0.99487684 -14	1.00595328 -13	1.01648877 -12	1.02653395 -11
1.68	0.99503877 -14	1.00610747 -13	1.01663593 -12	1.02667470 -12
1.69	0.99520056 -15	1.00626153 -14	1.01678297 -12	1.02681533 -10
1.70	0.99536220 -15	1.00641545 -12	1.01692989 -12	1.02695586 -11
1.71	0.99552369 -14	1.00656925 -14	1.01707669 -12	1.02709628 -12
1.72	0.99568504 -14	1.00672291 -13	1.01722337 -13	1.02723658 -10
1.73	0.99584625 -15	1.00687644 -13	1.01736992 -11	1.02737678 -11
1.74	0.99600731 -14	1.00702984 -13	1.01751636 -12	1.02751687 -12
1.75	0.99616823 -15	1.00718311 -13	1.01766268 -12	1.02765684 -10
1.76	0.99632900 -13	1.00733625 -13	1.01780888 -12	1.02779671 -11
1.77	0.99648964 -15	1.00748926 -13	1.01795496 -11	1.02793647 -11
1.78	0.99665013 -14	1.00764214 -13	1.01810093 -13	1.02807612 -11
1.79	0.99681048 -15	1.00779489 -13	1.01824677 -11	1.02821566 -11
1.80	0.99697068 -13	1.00794751 -13	1.01839250 -12	1.02835509 -10
1.81	0.99713075 -15	1.00810000 -13	1.01853811 -12	1.02849442 -12
1.82	0.99729067 -13	1.00825236 -12	1.01868360 -12	1.02863363 -10
1.83	0.99745046 -15	1.00840460 -14	1.01882897 -12	1.02877274 -11
1.84	0.99761010 -14	1.00855670 -12	1.01897422 -11	1.02891174 -11
1.85	0.99776960 -14	1.00870868 -13	1.01911936 -12	1.02905063 -11
1.86	0.99792896 -14	1.00886053 -13	1.01926438 -11	1.02918941 -10
1.87	0.99808818 -13	1.00901225 -12	1.01940929 -12	1.02932809 -11
1.88	0.99824727 -15	1.00916385 -13	1.01955408 -12	1.02946666 -11
1.89	0.99840621 -14	1.00931532 -13	1.01969875 -12	1.02960512 -10
1.90	0.99856501 -13	1.00946666 -12	1.01984330 -11	1.02974348 -11
1.91	0.99872368 -15	1.00961788 -14	1.01998774 -11	1.02988173 -11
1.92	0.99888220 -13	1.00976896 -11	1.02013207 -12	1.03001987 -10
1.93	0.99904059 -14	1.00991993 -13	1.02027628 -12	1.03015791 -10
1.94	0.99919884 -13	1.01007077 -13	1.02042037 -11	1.03029584 -10
1.95	0.99935696 -15	1.01022148 -13	1.02056435 -12	1.03043367 -11
1.96	0.99951493 -13	1.01037206 -11	1.02070821 -11	1.03057139 -11
1.97	0.99967277 -14	1.01052253 -14	1.02085196 -11	1.03070900 -10
1.98	0.99983047 -13	1.01067286 -12	1.02099560 -12	1.03084651 -10
1.99	0.99998804 -14	1.01082307 -12	1.02113912 -12	1.03098392 -11
2.00	1.00014547 -14	1.01097316 -12	1.02128252 -10	1.03112122 -11

LOG (G) FOR S=1.5

P	I=16		I=17	I=18	I=19
2.00	1.00014547 -14		1.01097316 -12	1.02128252 -10	1.03112122 -11
2.01	1.00030276 -13		1.01112313 -13	1.02142582 -12	1.03125841 -10
2.02	1.00045992 -14		1.01127297 -13	1.02156900 -12	1.03139550 -10
2.03	1.00061694 -13		1.01142368 -13	1.02171206 -10	1.03153249 -11
2.04	1.00077383 -14		1.01157228 -13	1.02185502 -12	1.03166937 -10
2.05	1.00093058 -13		1.01172175 -13	1.02199786 -12	1.03180615 -10
2.06	1.00108720 -14		1.01187109 -11	1.02214058 -10	1.03194283 -11
2.07	1.00124368 -13		1.01202032 -13	1.02228320 -12	1.03207940 -10
2.08	1.00140003 -14		1.01216942 -11	1.02242570 -11	1.03221587 -11
2.09	1.00155624 -12		1.01231840 -12	1.02256809 -11	1.03235223 -9
2.10	1.00171233 -15		1.01246726 -13	1.02271037 -11	1.03248850 -11
2.11	1.00186827 -12		1.01261599 -11	1.02285254 -12	1.03262466 -11
2.12	1.00202409 -14		1.01276461 -13	1.02299459 -10	1.03276071 -9
2.13	1.00217977 -13		1.01291310 -12	1.02313654 -12	1.03289667 -11
2.14	1.00233532 -13		1.01306147 -12	1.02327837 -11	1.03303252 -10
2.15	1.00249074 -14		1.01320972 -12	1.02342009 -10	1.03316827 -10
2.16	1.00264602 -12		1.01335785 -12	1.02356171 -12	1.03330392 -11
2.17	1.00280118 -14		1.01350586 -13	1.02370321 -11	1.03343946 -9
2.18	1.00295620 -13		1.01365375 -13	1.02384460 -11	1.03357491 -11
2.19	1.00311109 -13		1.01380152 -12	1.02398588 -11	1.03371025 -9
2.20	1.00326585 -13		1.01394917 -12	1.02412705 -11	1.03384550 -11
2.21	1.00342048 -13		1.01409670 -12	1.02426811 -10	1.03398064 -10
2.22	1.00357498 -13		1.01424411 -11	1.02440907 -12	1.03411568 -10
2.23	1.00372935 -13		1.01439141 -13	1.02454991 -11	1.03425062 -10
2.24	1.00388359 -14		1.01453858 -12	1.02469064 -10	1.03438546 -10
2.25	1.00403769 -12		1.01468563 -11	1.02483127 -11	1.03452020 -10
2.26	1.00419167 -13		1.01483257 -12	1.02497179 -12	1.03465464 -10
2.27	1.00434552 -13		1.01497939 -12	1.02511219 -10	1.03478938 -10
2.28	1.00449924 -12		1.01512609 -12	1.02525249 -11	1.03492382 -11
2.29	1.00465284 -14		1.01527267 -11	1.02539268 -10	1.03505815 -8
2.30	1.00480630 -12		1.01541914 -12	1.02553277 -12	1.03519240 -11
2.31	1.00495964 -14		1.01556549 -12	1.02567274 -10	1.03532654 -10
2.32	1.00511284 -12		1.01571172 -12	1.02581261 -11	1.03546058 -10
2.33	1.00526592 -13		1.01585783 -11	1.02595237 -10	1.03559452 -9
2.34	1.00541887 -12		1.01600383 -12	1.02609203 -12	1.03572837 -11
2.35	1.00557170 -13		1.01614971 -12	1.02623157 -10	1.03586211 -9
2.36	1.00572440 -13		1.01629547 -11	1.02637101 -10	1.03599576 -10
2.37	1.00587697 -13		1.01644112 -12	1.02651035 -11	1.03612931 -10
2.38	1.00602941 -12		1.01658665 -11	1.02664958 -11	1.03626276 -10
2.39	1.00618173 -13		1.01673207 -12	1.02678870 -11	1.03639611 -9
2.40	1.00633392 -12		1.01687737 -11	1.02692771 -10	1.03652937 -11
2.41	1.00648599 -13		1.01702256 -12	1.02706662 -11	1.03666252 -9
2.42	1.00663793 -12		1.01716763 -11	1.02720542 -10	1.03679558 -9
2.43	1.00678975 -13		1.01731259 -12	1.02734412 -11	1.03692855 -11
2.44	1.00694144 -13		1.01745743 -11	1.02748271 -10	1.03706141 -9
2.45	1.00709300 -12		1.01760216 -12	1.02762120 -11	1.03719418 -10
2.46	1.00724444 -12		1.01774677 -11	1.02775958 -10	1.03732685 -9
2.47	1.00739576 -13		1.01789127 -11	1.02789786 -10	1.03745943 -10
2.48	1.00754695 -12		1.01803566 -12	1.02803604 -12	1.03759191 -10
2.49	1.00769802 -13		1.01817993 -11	1.02817410 -9	1.03772429 -9
2.50	1.00784896 0		1.01832409 0	1.02831207 0	1.03785658 0

LOG(G) FOR S=1.5

P	I=20	I=21	I=22	I=23
0.	1.01200986 0	1.02222903 0	1.03198886 0	1.04132889 0
0.01	1.01216489 -14	1.02237701 -12	1.03213042 -12	1.04146455 -11
0.02	1.01231978 -14	1.02252487 -13	1.03227186 -12	1.04160010 -11
0.03	1.01247453 -14	1.02267260 -13	1.03241318 -12	1.04173554 -10
0.04	1.01262914 -15	1.02282020 -13	1.03255438 -12	1.04187088 -12
0.05	1.01278360 -14	1.02296767 -13	1.03269546 -12	1.04200610 -11
0.06	1.01293792 -14	1.02311501 -13	1.03283642 -12	1.04214121 -10
0.07	1.01309210 -14	1.02326222 -13	1.03297726 -11	1.04227622 -11
0.08	1.01324614 -15	1.02340930 -13	1.03311799 -12	1.04241112 -12
0.09	1.01340003 -13	1.02355625 -12	1.03325860 -12	1.04254590 -10
0.10	1.01355379 -14	1.02370308 -14	1.03339909 -12	1.04268058 -11
0.11	1.01370741 -15	1.02384977 -12	1.03353946 -12	1.04281515 -10
0.12	1.01386088 -13	1.02399634 -13	1.03367971 -11	1.04294962 -12
0.13	1.01401422 -14	1.02414278 -13	1.03381985 -12	1.04308397 -10
0.14	1.01416742 -14	1.02428909 -12	1.03395987 -11	1.04321822 -11
0.15	1.01432048 -14	1.02443528 -13	1.03409978 -12	1.04335236 -10
0.16	1.01447340 -14	1.02458134 -13	1.03423957 -12	1.04348640 -11
0.17	1.01462618 -14	1.02472727 -13	1.03437924 -11	1.04362033 -11
0.18	1.01477882 -13	1.02487308 -13	1.03451880 -12	1.04375415 -11
0.19	1.01493133 -14	1.02501876 -12	1.03465824 -11	1.04388786 -10
0.20	1.01508370 -14	1.02516432 -13	1.03479757 -12	1.04402147 -10
0.21	1.01523593 -14	1.02530975 -13	1.03493678 -12	1.04415498 -12
0.22	1.01538802 -13	1.02545505 -11	1.03507587 -10	1.04428837 -10
0.23	1.01553998 -14	1.02560024 -14	1.03521486 -12	1.04442166 -10
0.24	1.01569180 -13	1.02574529 -12	1.03535373 -12	1.04455485 -11
0.25	1.01584349 -14	1.02589022 -12	1.03549248 -11	1.04468793 -10
0.26	1.01599504 -14	1.02603503 -12	1.03563112 -11	1.04482091 -11
0.27	1.01614645 -13	1.02617972 -13	1.03576965 -12	1.04495378 -10
0.28	1.01629773 -13	1.02632428 -13	1.03590806 -11	1.04508655 -11
0.29	1.01644888 -14	1.02646871 -11	1.03604636 -11	1.04521921 -10
0.30	1.01659989 -13	1.02661303 -13	1.03618455 -12	1.04535177 -10
0.31	1.01675077 -14	1.02675722 -12	1.03632262 -11	1.04548423 -11
0.32	1.01690151 -13	1.02690129 -12	1.03646058 -11	1.04561658 -10
0.33	1.01705212 -13	1.02704524 -13	1.03659843 -11	1.04574883 -11
0.34	1.01720260 -14	1.02718906 -11	1.03673617 -11	1.04588097 -10
0.35	1.01735294 -13	1.02733277 -13	1.03687380 -12	1.04601301 -10
0.36	1.01750315 -13	1.02747635 -12	1.03701131 -10	1.04614495 -10
0.37	1.01765323 -13	1.02761981 -12	1.03714872 -12	1.04627679 -10
0.38	1.01780318 -14	1.02776315 -12	1.03728601 -11	1.04640853 -11
0.39	1.01795299 -12	1.02790637 -12	1.03742319 -11	1.04654016 -10
0.40	1.01810268 -14	1.02804947 -12	1.03756026 -11	1.04667169 -10
0.41	1.01825223 -13	1.02819245 -12	1.03769722 -11	1.04680312 -11
0.42	1.01840165 -13	1.02833531 -12	1.03783407 -11	1.04693444 -9
0.43	1.01855094 -13	1.02847805 -12	1.03797081 -11	1.04706567 -11
0.44	1.01870010 -13	1.02862067 -12	1.03810744 -11	1.04719679 -10
0.45	1.01884913 -13	1.02876317 -12	1.03824396 -11	1.04732781 -9
0.46	1.01899803 -13	1.02890555 -11	1.03838037 -10	1.04745874 -11
0.47	1.01914680 -12	1.02904782 -13	1.03851668 -12	1.04758956 -10
0.48	1.01929545 -14	1.02918996 -11	1.03865287 -10	1.04772028 -10
0.49	1.01944396 -13	1.02933199 -12	1.03878896 -12	1.04785090 -10
0.50	1.01959234 -12	1.02947390 -12	1.03892493 -10	1.04798142 -10

LOG(G) FOR S=1.5

P	I=20	I=21	I=22	I=23
0.50	1.01959234 −12	1.02947390 −12	1.03892493 −10	1.04798142 −10
0.51	1.01974060 −13	1.02961569 −11	1.03906080 −11	1.04811184 −10
0.52	1.01988873 −13	1.02975737 −13	1.03919656 −11	1.04824216 −10
0.53	1.02003673 −13	1.02989892 −11	1.03933221 −10	1.04837238 −10
0.54	1.02018460 −13	1.03004036 −11	1.03946776 −11	1.04850250 −9
0.55	1.02033234 −12	1.03018169 −13	1.03960320 −11	1.04863253 −11
0.56	1.02047996 −13	1.03032289 −11	1.03973853 −11	1.04876245 −9
0.57	1.02062745 −12	1.03046398 −11	1.03987375 −10	1.04889228 −11
0.58	1.02077482 −14	1.03060496 −12	1.04000887 −11	1.04902200 −9
0.59	1.02092205 −11	1.03074582 −12	1.04014388 −11	1.04915163 −10
0.60	1.02106917 −14	1.03088656 −11	1.04027878 −10	1.04928116 −10
0.61	1.02121615 −12	1.03102719 −12	1.04041358 −11	1.04941059 −9
0.62	1.02136301 −12	1.03116770 −11	1.04054827 −11	1.04953993 −11
0.63	1.02150975 −13	1.03130810 −12	1.04068285 −10	1.04966916 −9
0.64	1.02165636 −12	1.03144838 −11	1.04081733 −10	1.04979830 −10
0.65	1.02180285 −13	1.03158855 −11	1.04095171 −11	1.04992734 −9
0.66	1.02194921 −12	1.03172861 −12	1.04108598 −11	1.05005629 −11
0.67	1.02209545 −13	1.03186855 −12	1.04122014 −10	1.05018513 −9
0.68	1.02224156 −12	1.03200837 −10	1.04135420 −10	1.05031388 −9
0.69	1.02238755 −12	1.03214809 −12	1.04148816 −11	1.05044254 −10
0.70	1.02253342 −13	1.03228769 −12	1.04162201 −10	1.05057110 −10
0.71	1.02267916 −12	1.03242717 −10	1.04175576 −11	1.05069956 −10
0.72	1.02282478 −12	1.03256655 −12	1.04188940 −10	1.05082792 −9
0.73	1.02297028 −12	1.03270581 −11	1.04202294 −11	1.05095619 −10
0.74	1.02311566 −13	1.03284496 −11	1.04215637 −9	1.05108436 −9
0.75	1.02326091 −12	1.03298400 −12	1.04228971 −11	1.05121244 −9
0.76	1.02340604 −12	1.03312292 −10	1.04242294 −11	1.05134043 −11
0.77	1.02355105 −12	1.03326174 −12	1.04255606 −9	1.05146831 −8
0.78	1.02369594 −12	1.03340044 −11	1.04268909 −11	1.05159611 −11
0.79	1.02384071 −12	1.03353903 −11	1.04282201 −11	1.05172380 −8
0.80	1.02398536 −13	1.03367751 −11	1.04295482 −9	1.05185141 −11
0.81	1.02412988 −11	1.03381588 −11	1.04308754 −10	1.05197891 −8
0.82	1.02427429 −13	1.03395414 −11	1.04322016 −11	1.05210633 −10
0.83	1.02441857 −11	1.03409229 −12	1.04335267 −10	1.05223365 −10
0.84	1.02456274 −13	1.03423032 −10	1.04348508 −10	1.05236087 −8
0.85	1.02470678 −11	1.03436825 −11	1.04361739 −10	1.05248801 −11
0.86	1.02485071 −12	1.03450607 −11	1.04374960 −11	1.05261504 −8
0.87	1.02499452 −12	1.03464378 −11	1.04388170 −9	1.05274199 −10
0.88	1.02513821 −12	1.03478138 −11	1.04401371 −10	1.05286884 −9
0.89	1.02528178 −12	1.03491887 −11	1.04414562 −11	1.05299560 −10
0.90	1.02542523 −12	1.03505625 −11	1.04427742 −9	1.05312226 −8
0.91	1.02556856 −12	1.03519352 −11	1.04440913 −11	1.05324884 −10
0.92	1.02571177 −11	1.03533068 −10	1.04454073 −9	1.05337532 −10
0.93	1.02585487 −12	1.03546774 −11	1.04467224 −11	1.05350170 −8
0.94	1.02599785 −12	1.03560469 −11	1.04480364 −9	1.05362800 −10
0.95	1.02614071 −11	1.03574153 −11	1.04493495 −11	1.05375420 −9
0.96	1.02628346 −12	1.03587826 −11	1.04506615 −9	1.05388031 −9
0.97	1.02642609 −12	1.03601488 −10	1.04519726 −10	1.05400633 −9
0.98	1.02656860 −12	1.03615140 −11	1.04532827 −10	1.05413226 −9
0.99	1.02671099 −11	1.03628781 −11	1.04545918 −10	1.05425810 −10
1.00	1.02685327 −12	1.03642411 −10	1.04558999 −10	1.05438384 −9

LOG(G) FOR S=1.5

P	I=20	I=21	I=22	I=23
1.00	1.02685327 -12	1.03642411 -10	1.04558999 -10	1.05438384 -9
1.01	1.02699543 -11	1.03656031 -11	1.04572070 -10	1.05450949 -8
1.02	1.02713748 -12	1.03669640 -11	1.04585131 -9	1.05463506 -10
1.03	1.02727941 -11	1.03683238 -10	1.04598183 -10	1.05476053 -9
1.04	1.02742123 -12	1.03696826 -11	1.04611225 -10	1.05488591 -9
1.05	1.02756293 -11	1.03710403 -10	1.04624257 -10	1.05501120 -9
1.06	1.02770452 -11	1.03723970 -10	1.04637279 -10	1.05513640 -9
1.07	1.02784599 -11	1.03737526 -11	1.04650291 -9	1.05526151 -9
1.08	1.02798735 -12	1.03751071 -10	1.04663294 -10	1.05538653 -9
1.09	1.02812859 -11	1.03764606 -10	1.04676287 -9	1.05551146 -9
1.10	1.02826972 -11	1.03778131 -11	1.04689271 -11	1.05563630 -9
1.11	1.02841074 -12	1.03791645 -10	1.04702244 -9	1.05576105 -9
1.12	1.02855164 -11	1.03805149 -11	1.04715208 -9	1.05588571 -9
1.13	1.02869243 -11	1.03818642 -10	1.04728163 -11	1.05601028 -9
1.14	1.02883311 -12	1.03832125 -11	1.04741107 -8	1.05613476 -9
1.15	1.02897367 -11	1.03845597 -10	1.04754043 -11	1.05625915 -8
1.16	1.02911412 -11	1.03859059 -10	1.04766968 -9	1.05638346 -10
1.17	1.02925446 -12	1.03872511 -11	1.04779884 -9	1.05650767 -8
1.18	1.02939468 -10	1.03885953 -10	1.04792791 -10	1.05663180 -9
1.19	1.02953480 -12	1.03899383 -10	1.04805688 -10	1.05675584 -9
1.20	1.02967480 -11	1.03912804 -11	1.04818575 -9	1.05687979 -9
1.21	1.02981469 -11	1.03926214 -10	1.04831453 -9	1.05700365 -8
1.22	1.02995447 -11	1.03939614 -10	1.04844322 -11	1.05712743 -10
1.23	1.03009414 -11	1.03953004 -10	1.04857180 -8	1.05725111 -8
1.24	1.03023370 -12	1.03966384 -10	1.04870030 -10	1.05737471 -9
1.25	1.03037314 -10	1.03979754 -11	1.04882870 -9	1.05749822 -8
1.26	1.03051248 -11	1.03993113 -10	1.04895701 -10	1.05762165 -9
1.27	1.03065171 -12	1.04006462 -10	1.04908522 -9	1.05774499 -9
1.28	1.03079082 -10	1.04019801 -10	1.04921334 -9	1.05786824 -9
1.29	1.03092983 -11	1.04033130 -10	1.04934137 -10	1.05799140 -8
1.30	1.03106873 -12	1.04046449 -11	1.04946930 -9	1.05611448 -10
1.31	1.03120751 -10	1.04059757 -9	1.04959714 -10	1.05823746 -7
1.32	1.03134619 -11	1.04073056 -10	1.04972488 -9	1.05836037 -9
1.33	1.03148476 -11	1.04086345 -11	1.04985253 -9	1.05848319 -9
1.34	1.03162322 -11	1.04099623 -9	1.04998009 -9	1.05860592 -9
1.35	1.03176157 -11	1.04112892 -11	1.05010756 -10	1.05872856 -8
1.36	1.03189981 -10	1.04126150 -9	1.05023493 -8	1.05885112 -9
1.37	1.03203795 -12	1.04139399 -11	1.05036222 -11	1.05897359 -8
1.38	1.03217597 -10	1.04152637 -9	1.05048940 -8	1.05909598 -9
1.39	1.03231389 -11	1.04165866 -10	1.05061650 -9	1.05921828 -8
1.40	1.03245170 -10	1.04179085 -11	1.05074351 -10	1.05934050 -9
1.41	1.03258941 -12	1.04192293 -9	1.05087042 -9	1.05946263 -8
1.42	1.03272700 -10	1.04205492 -10	1.05099724 -9	1.05958468 -9
1.43	1.03286449 -11	1.04218681 -10	1.05112397 -9	1.05970664 -8
1.44	1.03300187 -10	1.04231860 -9	1.05125061 -9	1.05982852 -9
1.45	1.03313915 -11	1.04245030 -11	1.05137716 -9	1.05995031 -8
1.46	1.03327632 -11	1.04258189 -9	1.05150362 -9	1.06007202 -9
1.47	1.03341338 -10	1.04271339 -10	1.05162999 -10	1.06019364 -8
1.48	1.03355034 -11	1.04284479 -10	1.05175626 -8	1.06031518 -8
1.49	1.03368719 -10	1.04297609 -10	1.05188245 -10	1.06043664 -9
1.50	1.03382394 -11	1.04310729 -9	1.05200854 -8	1.06055801 -8

LOG(G) FOR S=1.5

G-214

P	I=20	I=21	I=22	I=23
1.50	1.03382394 -11	1.04310729 -9	1.05200854 -8	1.06055801 -8
1.51	1.03396058 -11	1.04323840 -10	1.05213455 -10	1.06067930 -9
1.52	1.03409711 -10	1.04336941 -10	1.05226046 -8	1.06080050 -8
1.53	1.03423354 -10	1.04350032 -10	1.05238629 -9	1.06092162 -8
1.54	1.03436987 -11	1.04363113 -9	1.05251203 -10	1.06104266 -9
1.55	1.03450609 -11	1.04376185 -10	1.05263767 -8	1.06116361 -7
1.56	1.03464220 -10	1.04389247 -9	1.05276323 -9	1.06128449 -10
1.57	1.03477821 -10	1.04402300 -10	1.05288870 -10	1.06140527 -7
1.58	1.03491412 -11	1.04415343 -10	1.05301407 -8	1.06152598 -9
1.59	1.03504992 -10	1.04428376 -9	1.05313936 -9	1.06164660 -8
1.60	1.03518562 -10	1.04441400 -10	1.05326456 -8	1.06176714 -8
1.61	1.03532122 -11	1.04454414 -9	1.05338968 -10	1.06188760 -8
1.62	1.03545671 -10	1.04467419 -10	1.05351470 -9	1.06200798 -9
1.63	1.03559210 -10	1.04480414 -10	1.05363963 -8	1.06212827 -8
1.64	1.03572739 -11	1.04493399 -9	1.05376448 -9	1.06224848 -8
1.65	1.03586257 -10	1.04506375 -9	1.05388924 -9	1.06236861 -8
1.66	1.03599765 -10	1.04519342 -10	1.05401391 -9	1.06248866 -8
1.67	1.03613263 -10	1.04532299 -9	1.05413849 -8	1.06260863 -9
1.68	1.03626751 -11	1.04545247 -10	1.05426299 -10	1.06272851 -8
1.69	1.03640228 -10	1.04558185 -9	1.05438739 -7	1.06284831 -7
1.70	1.03653695 -10	1.04571114 -10	1.05451172 -10	1.06296804 -9
1.71	1.03667152 -10	1.04584033 -9	1.05463595 -9	1.06308768 -8
1.72	1.03680599 -10	1.04596943 -9	1.05476009 -8	1.06320724 -8
1.73	1.03694036 -11	1.04609844 -10	1.05488415 -8	1.06332672 -8
1.74	1.03707462 -9	1.04622735 -9	1.05500813 -10	1.06344612 -9
1.75	1.03720879 -11	1.04635617 -9	1.05513201 -8	1.06356543 -7
1.76	1.03734285 -9	1.04648490 -10	1.05525581 -9	1.06368467 -8
1.77	1.03747682 -11	1.04661353 -9	1.05537952 -8	1.06380383 -8
1.78	1.03761068 -10	1.04674207 -9	1.05550315 -9	1.06392291 -8
1.79	1.03774444 -9	1.04687052 -10	1.05562669 -8	1.06404191 -9
1.80	1.03787811 -11	1.04699887 -8	1.05575015 -9	1.06416082 -7
1.81	1.03801167 -10	1.04712714 -10	1.05587352 -9	1.06427966 -8
1.82	1.03814513 -10	1.04725531 -10	1.05599680 -8	1.06439842 -8
1.83	1.03827849 -9	1.04738338 -8	1.05612000 -9	1.06451710 -8
1.84	1.03841176 -11	1.04751137 -10	1.05624311 -8	1.06463570 -8
1.85	1.03854492 -9	1.04763926 -8	1.05636614 -9	1.06475422 -8
1.86	1.03867799 -11	1.04776707 -10	1.05648908 -8	1.06487266 -8
1.87	1.03881095 -9	1.04789478 -9	1.05661194 -9	1.06499102 -8
1.88	1.03894382 -10	1.04802240 -10	1.05673471 -8	1.06510930 -8
1.89	1.03907659 -10	1.04814992 -8	1.05685740 -9	1.06522750 -7
1.90	1.03920926 -9	1.04827736 -9	1.05698000 -8	1.06534563 -8
1.91	1.03934184 -11	1.04840471 -10	1.05710252 -8	1.06546368 -8
1.92	1.03947431 -9	1.04853196 -8	1.05722496 -9	1.06558165 -8
1.93	1.03960669 -10	1.04865913 -10	1.05734731 -9	1.06569954 -8
1.94	1.03973897 -10	1.04878620 -8	1.05746957 -7	1.06581735 -8
1.95	1.03987115 -10	1.04891319 -10	1.05759176 -9	1.06593508 -7
1.96	1.04000323 -9	1.04904008 -8	1.05771386 -9	1.06605274 -9
1.97	1.04013522 -10	1.04916689 -10	1.05783587 -8	1.06617031 -6
1.98	1.04026711 -10	1.04929360 -9	1.05795780 -8	1.06628782 -9
1.99	1.04039890 -9	1.04942022 -8	1.05807965 -8	1.06640524 -8
2.00	1.04053060 -10	1.04954676 -9	1.05820142 -9	1.06652258 -7

LOG (G) FOR S=1.5

P	I=20		I=21		I=22		I=23	
2.00	1.04053060	-10	1.04954676	-9	1.05820142	-9	1.06652258	-7
2.01	1.04066220	-10	1.04967321	-10	1.05832310	-8	1.06663985	-8
2.02	1.04079370	-9	1.04979956	-8	1.05844470	-8	1.06675704	-7
2.03	1.04092511	-10	1.04992583	-9	1.05856622	-9	1.06687416	-9
2.04	1.04105642	-10	1.05005201	-9	1.05868765	-7	1.06699119	-7
2.05	1.04118763	-9	1.05017810	-9	1.05880901	-9	1.06710815	-7
2.06	1.04131875	-10	1.05030410	-9	1.05893028	-9	1.06722504	-9
2.07	1.04144977	-9	1.05043001	-9	1.05905146	-7	1.06734184	-7
2.08	1.04158070	-9	1.05055583	-8	1.05917257	-9	1.06745857	-7
2.09	1.04171154	-11	1.05068157	-9	1.05929359	-8	1.06757523	-9
2.10	1.04184227	-8	1.05080722	-9	1.05941453	-8	1.06769180	-6
2.11	1.04197292	-10	1.05093278	-9	1.05953539	-8	1.06780831	-9
2.12	1.04210347	-10	1.05105825	-9	1.05965617	-8	1.06792473	-7
2.13	1.04223392	-9	1.05118363	-8	1.05977687	-9	1.06804108	-8
2.14	1.04236428	-10	1.05130893	-9	1.05989748	-7	1.06815735	-7
2.15	1.04249454	-9	1.05143414	-9	1.06001802	-9	1.06827355	-7
2.16	1.04262471	-9	1.05155926	-8	1.06013847	-8	1.06838968	-9
2.17	1.04275479	-10	1.05168430	-10	1.06025884	-8	1.06850572	-7
2.18	1.04288477	-9	1.05180924	-8	1.06037913	-8	1.06862169	-7
2.19	1.04301466	-9	1.05193410	-8	1.06049934	-7	1.06873759	-8
2.20	1.04314446	-10	1.05205888	-9	1.06061948	-10	1.06885341	-7
2.21	1.04327416	-9	1.05218357	-9	1.06073952	-7	1.06896916	-8
2.22	1.04340377	-9	1.05230817	-9	1.06085949	-8	1.06908483	-7
2.23	1.04353329	-10	1.05243268	-8	1.06097938	-8	1.06920043	-8
2.24	1.04366271	-9	1.05255711	-8	1.06109919	-8	1.06931595	-7
2.25	1.04379204	-9	1.05268146	-10	1.06121892	-8	1.06943140	-8
2.26	1.04392128	-9	1.05280571	-7	1.06133857	-8	1.06954677	-7
2.27	1.04405043	-10	1.05292989	-10	1.06145814	-8	1.06966207	-8
2.28	1.04417948	-9	1.05305397	-8	1.06157763	-8	1.06977729	-7
2.29	1.04430844	-9	1.05317797	-8	1.06169704	-8	1.06989244	-7
2.30	1.04443731	-9	1.05330189	-9	1.06181637	-8	1.07000752	-8
2.31	1.04456609	-10	1.05342572	-9	1.06193562	-7	1.07012252	-7
2.32	1.04469477	-8	1.05354946	-8	1.06205480	-9	1.07023745	-7
2.33	1.04482337	-10	1.05367312	-8	1.06217389	-7	1.07035231	-8
2.34	1.04495187	-9	1.05379670	-9	1.06229291	-9	1.07046709	-7
2.35	1.04508028	-8	1.05392019	-8	1.06241184	-7	1.07058180	-8
2.36	1.04520861	-10	1.05404360	-9	1.06253070	-8	1.07069643	-6
2.37	1.04533684	-10	1.05416692	-8	1.06264948	-8	1.07081100	-8
2.38	1.04546497	-8	1.05429016	-9	1.06276818	-8	1.07092549	-8
2.39	1.04559302	-9	1.05441331	-8	1.06288680	-7	1.07103990	-7
2.40	1.04572098	-9	1.05453638	-8	1.06300535	-8	1.07115424	-6
2.41	1.04584885	-9	1.05465937	-9	1.06312382	-9	1.07126852	-9
2.42	1.04597663	-10	1.05478227	-8	1.06324220	-6	1.07138271	-6
2.43	1.04610431	-8	1.05490509	-8	1.06336052	-9	1.07149684	-8
2.44	1.04623191	-9	1.05502783	-9	1.06347875	-7	1.07161089	-7
2.45	1.04635942	-9	1.05515048	-8	1.06359691	-9	1.07172487	-7
2.46	1.04648684	-9	1.05527305	-9	1.06371498	-6	1.07183878	-7
2.47	1.04661417	-9	1.05539553	-7	1.06383299	-9	1.07195262	-8
2.48	1.04674141	-9	1.05551794	-9	1.06395091	-7	1.07206638	-7
2.49	1.04686856	-9	1.05564026	-9	1.06406876	-8	1.07218007	-7
2.50	1.04699562	0	1.05576249	0	1.06418653	0	1.07229369	0

LOG(G) FOR S=1.5

P	I=24		P	I=24		P	I=24	
0.	1.05028373	0	0.50	1.05667501	-10	1.00	1.06283475	-9
0.01	1.05041397	-10	0.51	1.05680040	-9	1.01	1.06295572	-8
0.02	1.05054411	-11	0.52	1.05692570	-9	1.02	1.06307661	-9
0.03	1.05067414	-10	0.53	1.05705091	-9	1.03	1.06319741	-8
0.04	1.05080407	-9	0.54	1.05717603	-10	1.04	1.06331813	-8
0.05	1.05093391	-11	0.55	1.05730105	-8	1.05	1.06343877	-9
0.06	1.05106364	-10	0.56	1.05742599	-10	1.06	1.06355932	-9
0.07	1.05119327	-10	0.57	1.05755083	-9	1.07	1.06367978	-7
0.08	1.05132280	-10	0.58	1.05767558	-9	1.08	1.06380017	-9
0.09	1.05145223	-10	0.59	1.05780024	-9	1.09	1.06392047	-8
0.10	1.05158156	-10	0.60	1.05792481	-10	1.10	1.06404069	-9
0.11	1.05171079	-10	0.61	1.05804928	-8	1.11	1.06416082	-8
0.12	1.05183992	-9	0.62	1.05817367	-9	1.12	1.06428087	-8
0.13	1.05196896	-11	0.63	1.05829797	-10	1.13	1.06440084	-9
0.14	1.05209789	-10	0.64	1.05842217	-8	1.14	1.06452072	-8
0.15	1.05222672	-9	0.65	1.05854629	-9	1.15	1.06464052	-8
0.16	1.05235546	-10	0.66	1.05867032	-10	1.16	1.06476024	-8
0.17	1.05248410	-10	0.67	1.05879425	-8	1.17	1.06487988	-9
0.18	1.05261264	-10	0.68	1.05891810	-10	1.18	1.06499943	-7
0.19	1.05274108	-10	0.69	1.05904185	-8	1.19	1.06511891	-9
0.20	1.05286942	-10	0.70	1.05916552	-9	1.20	1.06523830	-9
0.21	1.05299766	-9	0.71	1.05928910	-9	1.21	1.06535760	-7
0.22	1.05312581	-10	0.72	1.05941259	-9	1.22	1.06547683	-8
0.23	1.05325386	-10	0.73	1.05953599	-9	1.23	1.06559598	-9
0.24	1.05338181	-10	0.74	1.05965930	-9	1.24	1.06571504	-8
0.25	1.05350966	-9	0.75	1.05978252	-8	1.25	1.06583402	-8
0.26	1.05363742	-10	0.76	1.05990566	-10	1.26	1.06595292	-8
0.27	1.05376508	-9	0.77	1.06002870	-8	1.27	1.06607174	-8
0.28	1.05389265	-10	0.78	1.06015166	-9	1.28	1.06619048	-8
0.29	1.05402012	-10	0.79	1.06027453	-9	1.29	1.06630914	-8
0.30	1.05414749	-10	0.80	1.06039731	-8	1.30	1.06642772	-9
0.31	1.05427476	-9	0.81	1.06052001	-10	1.31	1.06654621	-7
0.32	1.05440194	-9	0.82	1.06064261	-8	1.32	1.06666463	-8
0.33	1.05452903	-10	0.83	1.06076513	-8	1.33	1.06678297	-9
0.34	1.05465602	-10	0.84	1.06088757	-10	1.34	1.06690122	-7
0.35	1.05478291	-9	0.85	1.06100991	-8	1.35	1.06701940	-9
0.36	1.05490971	-9	0.86	1.06113217	-9	1.36	1.06713749	-7
0.37	1.05503642	-11	0.87	1.06125434	-8	1.37	1.06725551	-8
0.38	1.05516302	-8	0.88	1.06137643	-9	1.38	1.06737345	-9
0.39	1.05528954	-10	0.89	1.06149843	-9	1.39	1.06749130	-7
0.40	1.05541596	-9	0.90	1.06162034	-9	1.40	1.06760908	-8
0.41	1.05554229	-10	0.91	1.06174216	-8	1.41	1.06772678	-8
0.42	1.05566852	-9	0.92	1.06186390	-8	1.42	1.06784440	-8
0.43	1.05579466	-10	0.93	1.06198556	-9	1.43	1.06796194	-8
0.44	1.05592070	-9	0.94	1.06210713	-9	1.44	1.06807940	-8
0.45	1.05604665	-9	0.95	1.06222861	-8	1.45	1.06819678	-7
0.46	1.05617251	-10	0.96	1.06235001	-9	1.46	1.06831409	-9
0.47	1.05629827	-9	0.97	1.06247132	-8	1.47	1.06843131	-7
0.48	1.05642394	-9	0.98	1.06259255	-9	1.48	1.06854846	-8
0.49	1.05654952	-9	0.99	1.06271369	-8	1.49	1.06866553	-8
0.50	1.05667501	-10	1.00	1.06283475	-9	1.50	1.06878252	-8

LOG(G) FOR S=1.5

P	I=24		P	I=24	
1.50	1.06878252	-8	2.00	1.07453511	-6
1.51	1.06889943	-7	2.01	1.07464828	-8
1.52	1.06901627	-9	2.02	1.07476137	-7
1.53	1.06913302	-7	2.03	1.07487439	-7
1.54	1.06924970	-8	2.04	1.07498734	-8
1.55	1.06936630	-7	2.05	1.07510021	-6
1.56	1.06948283	-8	2.06	1.07521302	-8
1.57	1.06959928	-8	2.07	1.07532575	-6
1.58	1.06971565	-8	2.08	1.07543842	-8
1.59	1.06983194	-7	2.09	1.07555101	-7
1.60	1.06994816	-8	2.10	1.07566353	-8
1.61	1.07006430	-8	2.11	1.07577597	-6
1.62	1.07018036	-8	2.12	1.07588835	-7
1.63	1.07029634	-7	2.13	1.07600066	-8
1.64	1.07041225	-7	2.14	1.07611289	-6
1.65	1.07052809	-8	2.15	1.07622506	-8
1.66	1.07064385	-8	2.16	1.07633715	-6
1.67	1.07075953	-8	2.17	1.07644918	-8
1.68	1.07087513	-7	2.18	1.07656113	-7
1.69	1.07099066	-7	2.19	1.07667301	-6
1.70	1.07110612	-9	2.20	1.07678483	-8
1.71	1.07122149	-6	2.21	1.07689657	-7
1.72	1.07133680	-8	2.22	1.07700824	-6
1.73	1.07145203	-8	2.23	1.07711985	-8
1.74	1.07156718	-7	2.24	1.07723138	-6
1.75	1.07168226	-8	2.25	1.07734285	-8
1.76	1.07179726	-8	2.26	1.07745424	-6
1.77	1.07191218	-6	2.27	1.07756557	-8
1.78	1.07202704	-8	2.28	1.07767682	-6
1.79	1.07214182	-8	2.29	1.07778801	-8
1.80	1.07225652	-7	2.30	1.07789912	-6
1.81	1.07237115	-8	2.31	1.07801017	-7
1.82	1.07248570	-7	2.32	1.07812115	-7
1.83	1.07260018	-7	2.33	1.07823206	-7
1.84	1.07271459	-8	2.34	1.07834290	-6
1.85	1.07282892	-7	2.35	1.07845368	-8
1.86	1.07294318	-7	2.36	1.07856438	-6
1.87	1.07305737	-8	2.37	1.07867502	-7
1.88	1.07317148	-7	2.38	1.07878559	-8
1.89	1.07328552	-8	2.39	1.07889608	-5
1.90	1.07339948	-7	2.40	1.07900652	-8
1.91	1.07351337	-7	2.41	1.07911688	-7
1.92	1.07362719	-8	2.42	1.07922717	-4
1.93	1.07374093	-6	2.43	1.07933740	-7
1.94	1.07385461	-9	2.44	1.07944756	-7
1.95	1.07396820	-6	2.45	1.07955765	-6
1.96	1.07408173	-7	2.46	1.07966768	-8
1.97	1.07419519	-8	2.47	1.07977763	-6
1.98	1.07430857	-7	2.48	1.07988752	-6
1.99	1.07442188	-8	2.49	1.07999735	-8
2.00	1.07453511	-6	2.50	1.08010710	0

APPENDIX B

Differences between Values of log $G_s^{(1)}$
Tabulated by Brown and Brouwer
and the Values Computed for Comparison

G-214

S=1.5

S=0.5

S=1.5

S=0.5

G-214

S=1.5

S=0.5

G-214

S=1.5

	11	10	9	8	7	6	5	4	3	2	1	0

I=

S=0.5

	11	10	9	8	7	6	5	4	3	2	1	0

I=

2.50

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surabilities and in computing long period effects in
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major axes.   The logarithms of the coefficients of
$\cos iS$ in the expansions of Δ^{-1} and Δ^{-3} are tabu-
lated for $i = 12$ through 24.

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